THE

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Agricultural Calendar.

Farm Work for December.

Years mark the course of time, and the months are as mile-stones along life's highway. December, the last month of the year 1878, has come, and soon another year will begin. This is the last number of the fifteenth volume of the MARYLAND FARMER, and, while it is not always over-pleasant to the journalist to announce to his readers the close of a volume, it is our lot on this occasion to feel that we have faithfully performed our duty to our subscribers, to feel grateful to a kind Providence that death has erased so few from our roll, and that the labors of the husbandmen have been crowned with unusual abundance. We have been blessed with the most propitious seasons and finest weather almost ever known, and all would be joyful Thanksgiving but for the deplorable visitation of that plague — the Yellow Fever — which, for weeks, caused such terrible loss of life over a wide area of our beloved South.

For ourselves, we have cause for great thankfulness for individual health and the prosperous condition in which the efforts of our friends have placed the MARYLAND FARMER; and to them, for their aid in procuring recruits in our army of subscribers and correspondents, for their support in payment of subscriptions, and — best of all — their cheering commendation which greatly sustained us in our labors for the common good, we return our heartfelt thanks. Thus we are encouraged to exert ourselves in the future to do our very utmost to increase the usefulness and practical value of the MARYLAND FARMER, and to make each number worth more than the whole year's subscription.

From these reflections let us turn our thoughts to what is to be the work of the month, that we may have all things prepared for the coming of the New Year.

There really ought to be but little heavy work done this month; if all was done last month that was proper to be done. Though physically the farmer may be not called on to labor hard, he will have his mind taxed to accomplish all that a good system of farming reqnires of him during this last month of the year.

We presume that the Corn has been housed; if not, it should be got under lock and key as soon as possible, to save waste and depredations from man, birds and beasts and the numerous wild animals that are laying up their winter stores.

TOBACCO.

Be sure to see that the tobacco houses are tight and safe from storms, and the doors and windows opened in all good weather and closed at night. Those who are fortunate enough to have an early crop and plenty of house-room, and wise enough to hang the sticks wide apart so as to give it plenty of air to cure it bright, would do well not to press it up close together, to exclude as much damp air as possible, or it will change from bright to a dark color. As soon as the stems are dry enongh they should be stripped from the stalks and bulked in "wind-rows." to get in shape, and then hung close on small sticks in a dry part of the house, to get perfectly dry; then put in bulk eight or ten rows, and weight down and left to finish "conditioning" before packing. It will come out of that bulk sweet smelling, with a nutty aroma, and smooth, glossy and yielding as a lady's kid glove. Such is well cured, well managed Tobacco, and will command a good price as soon as offered in the market.

PREPARE FOR WINTER.

Put the ice-pond in fine order; secure a large supply of dry wood, and coal enough for winter; gather a large quantity of dry leaves for beds for the stock,— hogs especially,— pack them in pens and cover the top of the pen with straw or corn-talk fodder, or under a shed, so they can be got

at handily during winter. Cover over the barn yard with litter and corn-stalks. Make comfortable shelters, separate, for sheep, colts, calves and brood-mares. Keep them well littered with straw or leaves. See that the hog pens are warm, dry, and have a plenty of leaves, occasionally a little sulphur and salt in their mush or gruel, clean water all the time. Give them rotten wood and charcoal. Make your killing hogs fat as quickly as you can, so as to kill before very cold weather, for they will not take on much flesh or fat in very cold weather.

Gather a large supply of provender, convenient to the barn yard and other places where stock are kept. Have racks, and keep them filled with nice, clean straw, that cattle and horses can have access to it at all times. Straw is too much under-rated as long food for stock. Crush and grind most of the corn you use, instead of feeding it on the ear. Cut the hay or straw, and dampen it so the meal used with it will stick. This is an excellent feed for cows and horses in all mild weather during winter.

See that all the farm implements are put under cover, and all needed repairs done. Do not put off repairing farm utensils and tools until they are wanted. Much time and vexation will be spared if this suggestion be attended to at once. Sell off all your old or indifferent stock and get improved breeds, at least males that are high-bred. Increase your stock of all sorts, sheep particularly, to the highest capacity of your farm. There is money in stock.

Now that the nfghts are long, an hour or so each night should be devoted to preparing all accounts connected with the farm. The amounts paid out for hire, taxes, implements and stock, and indeed everything that is properly chargeable to the farm ; to which add six per cent. on the cash value of the farm and stock, and fifteen per cent. on the cash value of all implements. On the credit side, all sums received from sales of farm products, stock, wool, fruits, butter, poultry, &c.; to which add a fair value for the fuel, vegetables, meats, butter, milk, &c., consumed by the family, house-rent, fruits, and a fair allowance for the keep and use of horses employed in riding or driving for pleasure. Prepare inventories of stock and utensils, or, like a merchant, set down in a proper account all the stock, implements, &c., that you may compare by a true balance-sheet your profits or losses as compared with the previous years. Only in this way can a farmer know whether he is making profits, and to what extent. In this way only can full justice be done the farm. These accounts will show you any errors you may have committed, and suggest to you many matters for reflection and improvement during the coming year.

Having done these things, which we deem essential,—indeed, an imperative duty on the part of every farmer,— you will be prepared to read complacently the MARYLAND FARMER, and be in better spirits to enjoy your Christmas—which we hope will be a happy one for each and all of our patrons.

THE ANNUAL ADDRESS.

Before the Maryland State Agricultural and Mechanical Society, held at Pimlico.

Delivered October 26th, 1878,

BY THE HON. T. F. BAYARD, OF DELAWARE.

Senator Bayard was received with great applause, and stated his desire to mingle with the people of Maryland had caused him to avoid other engagements. He said he recognized agriculture as the chief source of production and wealth, and would like to see a stronger infusion of the intellect of leading men in the agricultural and mechanical pursuits in our representative bodies which framed our laws and moulded our institutions. Mr. Bayard said :

Country life gives not merely the leisure for study, but especially is fitted for meditation and reflection, needed to counteract the heated sensationalism and feverish thirst for novelty so painfully characteristic of the time and country in which we live. From homes in the country, oftentimes obscure and sometimes impoverished, have emerged those men who most potently and beneficently have influenced the history of our country.

Few figures stand forth upon the canvas of history so eminent and admirable as that of John Hampden, the English country gentleman, whose monument records that "with great courage and consummate abilities he began a noble opposition to an arbitrary court in defense of the liberties of his country, supported them in Parliament and died for them in the field." And his compeer in virtue and ability, separated in date by more than two centuries, but who will ever rank with him in history, whose constancy and sound judgment, whose intrepidlty and self control have proved such a shield and buckler to his people when beset by difficulties and dangers greater than even Hampden confronted, is to-day supplied

in our own land in Wade Hampton, the planter of South Carolina. [Great applause.]

Away from cities, in an obscure village, James Watt, the inaugurator of our present wonderful condition of mechanical progress, sat watching the lid of the tea-kettle as it rose and fell, until he comprehended the imprisoned power which proclaimed its birth in struggles and demanded and irresistably compelled its release from confinement.

Under our system of suffrage, as conducted in the cities, public expenditures have become so excessive, so wild and profligate, and so large a class of the population have come to look upon the public treasury as their rightful means of support, and the corrupt improvement of private property at public cost has become so common that the power to incur further indebtedness has been withdrawn from the local control of city officials and committed to the restraining influencies of State Legislatures, which are composed chiefly of representatives from the country distriets. Does not this fact constitute a public admission that a more reliable sentiment, a more "saving common-sense" in the care and administration of property exists among the citizens of the rural districts than would seem to control their sharper-witted brethren massed at the centres of population?

Never was there a time in the history of our country when calm, independent and resolute resistance to wild and dangerous popular fallacies was so needed as now.

If, in the midst of such financial distress and bewildermeut as now surround us, remedies. illusory and yet plausible, should be urged,—schemes which promise immediate relief, unbonnded, easy and seductive, and which has caught the popular mind sufficiently to promise the possession of temporary political power to their most conspicuous advocates,—how plain is the duty and responsibility of every man who sees the lurking error and the concealed danger of such measures to bear his testimony in loud warning against them? What answer should the farming classes, the land owners and the hardy yeomen of the United States give to these strange. wild cries we hear going up from the political conventions of parties with new names, that no more rent should be paid for land, no more interest for the use of money, that the precious metals should be discarded, and "absolute money" ordained by law should replace and measure all values and be received for all dues? Who should so strenuously resist all schemes which tend to lessen public reverence for pledged faith, to weaken confidence and to cripple and destroy public (and, of course, private) credit by agreeing to plans for the indefinite postponement of the payment of public engagements according to their terms? What portion of the American people need credit so much and so regularly as the farmer, who has to wait six months between seed time and harvest for his means of payment? If a man would enjoy credit let him denounce all schemes to weaken credit, and insist upon all that will give it strength. To the poor and honest man who needs credit and is compelled to borrow money, I earnestly commend these words What portion of the American people know so well as the agriculturai classes the great fact that all values arise out of labor, and that nothing of value can be had without its share of labor? To whom, therefore, can the fallacy that wealth can be created by empty promises to create it be more apparent, and by whom should it more scornfully and promptly be rejected? Who knows the reality and necessity of steady, continuous manual industry better than the American farmer? and who can better attest the falsehood of a system of currency which instructs men that pieces of paper upon which is printed a promise of payment never to be redeemed, and which can be multiplied indefinitely at the will of any accidental majority of Congress, can ever be a stable and reliable measure of the value of those crops upon the production of which so much human toil, anxiety and care have been bestowed?

The pretended mysteries of the alchemists have long since become the subject of human pity and derision, and surely the attempt now to revive the greater delusion that a printed government certificate of value. not convertible into anything of value, can take absolutely and permanently the place of and perform all the functions of actual value, will speedily be discarded by the "sober second-thought" of the American people. But little more than twelve months ago we witnessed here in Maryland and in other States occurrences growing out of conflicting claims of labor and capital, in which lawlessness raised its horrid front, and shocking scenes of insane and savage destruction of property and life were enacted well calculated to fill every eitizen with apprehension and deep anxiety. So long as public peace and safety are in jeopardy, there can be for all good citizens but one immediate, ever-present and paramount duty — the maintenance of the law; and when law is obeyed, and sits firmly and unquestioned in its rightful seat of power, then, and

only then, and not until then, shall the hearing and relief of alleged injuries and injustice be patiently, calmly and kindly heard, investigated and remedied, so far as legal justice can suffice.

Owing to a variety of causes, which I will not attempt to recapitulate, there is to-day a large body of onr fellow-countrymen unemployed and in want, who are entitled to the most intelligent consideration and most active friendship and assistance. Go into the streets of Baltimore, and indeed of every lesser town, and you will find them idle, but most anxious to be honestly employed. I read, a few months since, the statement of a leading coal land owner and miner in one of the Pennsylvania valleys, in which he assured the unemployed people of his district that all the coal mining now needed could be done with one-half the hands gathered in that region, and that for the other half there was no prospect of employment. These men were to be counted by the thousands, and with their families are to be counted by ten thousands.

When I think of the fair and fertile peninsula on which I live, and of which our dear "Eastern Shore" forms part, I wish from my heart that all of these strong and willing hands of labor could be transported and permanently estabiiseed on Maryland and Delaware farms.

When we cast our eyes across the ocean, either to the east or the west, and see the fearful ravages of death in the starvation of millions in British India and the Chinese empire, or witness an imbruted condition of living humanity with more than the pangs and none of the deliverance of death itself, we can better form an idea of the difficulties of human government under conditions of dense population and insufficient production, and realize the blessings of communities such as as our own Maryland and Delaware, where, under just and equal laws, the results of industry are protected and personal liberty guaranteed, and where a roof to shelter from the elements, warm clothing and abundant and substantial food are obtainable by any man who, with moderate health and strength, is content to walk with industry, sobriety and simple honesty as his companions.

Has there not been for more than twelve years past a steady exodus of our young yeomanry from the country districts to the towns and cities? Is it not a fact that the steady labors of the farm, and the duller occupations and amusements of the homestead, have proved irksome and distasteful to many of the present generation, who have sought in the hot-bed growth of trade and speculation, fostered by paper money, in our centres of population, a more profitable, an easier or more exciting kind of life? What has been the result? The cities are filled with the idle victims of over trade and exploded speculations. Agricultural labor has been abandoned by those most fit for it, and our farmers have been compelled to get along with less competent hands and pay them higher wages. As a result, production has been lessened and at the same time the cost of production has been increased. One obvious cure for much of the distress we now witness in cities and manufacturing centres will be found in the return of the population to the cultivation of American farms, which to-day are at prices far below their intrinsic value because the compensations and advantages of country life and agricultural occupations have not been duly weighed and appreciated.

There need be no fears of over-production of the fruits of the earth by American farmers, so long, at least, as the mad ambitions of European rulers turn that continent into a vast camp or battle-field, and pervert the energies of their peoples to their mutual destruction, and by vast military establishments suck the very life-blood out of the industries they profess to protect. The progress of invention and the application of natural forces to mechanical uses, within the last quarter of a century, is indeed marvellous. Undoubtedly every invention whereby labor is released from any task leaves it free to seek new fields of employment, and thereby production is proportionally increased, and production is wealth, and personal comfort and luxury are the followers of wealth. Whether the laborer is made more intelligent, and his condition on the whole advanced, is a deeply interesting and important question which I will not pause now to discuss.

In considering the benefits of the invention of labor-saving machinery to the laborer, the increased time for the cultivation of his faculties is obvious, and this shows the importance of providing healthy mental occupation. In proportion as mechanical improvement makes personal thought and skill in the operative less necessary, and so tends to deaden his intelligence, the need of food for his mind is increased and should be supplied. The love and habit of reading should be encouraged so that when men and women have leisure it will not be for mischief, but improvement. It seems to me that every sgricultural society ought to own a library of sensible and entertaining books to refresh the weary and attract inquiring minds among the laboring class. [Great applause.]

By good authority we are told that in 1850-'60 the largest cotton crop in the United States—up-

wards of 5,000,000 bales—was produced, and that but two per cent. of the territory especially adapted to its cultivation was occupied. Knowing the peculiar requirements of this plant in soil and climate, and the comparatively restricted area, imagination fails to picture the capacities of this country under the wonderful improvements in mechanics as applied to agriculture, of chemistry as applied to agriculture, and of the means of transporting the products of agriculture; not cotton only, but all the other nnmberless crops so much the less circumscribed as to fitting soil and climate. Surely this land could be the granary and store-house of the whole world.

The skilful cultivation practiced for two centuries in Holland, if applied to the marshes and neglected lands surrounding some of our chief cities, would result in marvellous production. Such, for instance, as at Beemster, where 18,000 acres of the most fertile and valuable land lies sixteen feet below the level of the adjacent sea, and yet was drained in 1612, and so ever since maintained; and some of the finest meadows are more than thirty feet below the water level. And yet Holland, like all the rest of Europe, is glad to use the labor-saving machinery of the United States.

Here is the beneficence of free-trade in thought—each gathering good from the other—all benefited by the discovery of each. In the utilization of what is now regarded as wastes, the American farmers, especially of our own and the more Southern States, have much to learn. The "dung hill," of which so many speak with such contempt, and of which so few appreciate the value, has proved the foundation of solid wealth, well worthy of intelligent care. From the Chinese we may learn much as to this, and every day the ignorant wastes and sanitary dangers of the sewerage of our towns and cities are forcing themselves upon the consideration of thoughtful minds. No farmer but should constantly experiment upon the capacity of his land. It is only by such means that its possible value can be known.

To-day the "balance of trade," as it is called, is effected in favor of the United States chiefly by the cotton crop, yet a wheelbarrow could have carried that crop less than one hundred years ago. In 1782, eight bags (not bales) of cotton were seized in England on a ship from the United States because, it was supposed to be impossible that so much of the fibre could be produced in this country. The very names of calico from Calcutta, and muslin from Moussoul, tell us the Oriental origin of our household fabrics. Rice, of which the production in Carolina and the other Southern States is so extensive and important, is not indigenous to our soil, but is alleged to have started from a single peck of paddy or rice in the husk, given by the captain of a Dutch brig to Governor Smith, at Charleston, in 1694, into which port the vessel had put in distress. Its culture was afterwards, in 1818, introduced into Louisiana by John Law's famous "Company of the West." To-day ours is the finest rice culture in the world. There are now known three hundred species of grasses, and may I not ask why are not many of these found suitable for this region, for profitable cultivation, for grazing and live stock improvement?

In reflecting upon the evils which to day afflict our country, which have prostrated its prosperity and paralized its industries and commerce, I trace the want of the fireside virtues I have named. Ours is a government of laws, but laws moulded by public opinion. In a reformed, regenerated public opinion must we look for the cure of the evils which unclean dishonesty, disregard for truth and honor, unscrupulous private greed and unpatriotic animosities have brought upon us. The family and home circle are the natural birthplace and nursery of the principles which, being educated and established there, expand into the community and pervade the whole body of laws and government with their sober and sweet influences. The care of his family is the just, happiest and proudest duty of the American citizen, and to the American mother is assigned the power and duty of moulding the character of the American man. No written law, no established constitution has created or assigned these duties, but in their just performance rest our chief hopes for individual and national welfare and happiness. [Applause.]

Experiments with Artificial Manures.

The following are from a paper read by Mr. J. B. Lawes, who has been experimenting for 40 years with artificial manures—before the Society of Arts in England, in December of last year;

PERMANENT GRASS.—"The application of artificial manures alone, containing nitrogen, phosphoric acid, and potash, for 22 years in succession, has given an annual average crop of hay of nearly three tons per acre. Twice during the period, a second crop has been cut without further manuring; and it has on each occasion yielded nearly two and one-half tons more."

PERMANENT WHEAT.—"In like manner, artificial manures used alone, supplying nitrogen, phosphoric acid and potash, have given an average, over twenty five years, of 36¾ bushels of dressed grain and more than two tons of straw per acre per annum. The produce of the present year was 40 bushels of dressed grain, and 2 tons, 14 cwt. of straw. No dung has been applied to this land for thirty eight years."

ROOT CROPS.—"In 1876 the produce of roots (mangles), with artificial manure alone, containing nitrogen, phosphoric acid and potash was 22 tons, 11 cwt., and in the present year, (1877,) it has been 22 tons, 2 cwt. No dung has been applied to these plots for nearly forty years."

The Renovation of Worn-out Soils.

We give below the able and very practical Essay of THOMAS MOORE, written 8th month 1801 at his residence, the Retreat, Montgomery county Md.

It needs no comment from us, as it will be read by thousands of appreciative readers, who will judge of its merits and see its applicability to the present times:

THE GREAT ERROR OF AMERICAN AGRICULTURE EXPOSED, &C.

Prejudice, that great bar to improvement in the arts and sciences, perhaps no where exerts its baneful influence with more mischievous effect than in the practice of agriculture, particularly on this part of the American continent. Our predecessors emigrating from the different European countries, each brought with him the prejudices he had imbibed in his native land, and adopted the practice in this country, that he, and perhaps his forefathers, for ages before him, had adhered to, notwithstanding the great difference of soil and climate absolutely requiring a very different course of conduct. Those prejudices acquired strength by time, and practices became venerable for their antiquity: and being accustomed to consider ourselves as the children of the countries from which we descended, of course we looked upon them as the only legitimate sources of improvement; the consequence of which has been, that notwithstanding considerable improvements and discoveries in agriculture have been made in Great Britain and other European countries, we have not derived those advantages from them, which might have been expected. Many of them having been implicitly adopted here, without the necessary variation for the difference in soil and climate, have failed. These unsuccessful experiments have tended to confirm the people of America in their former prejudices, and to induce them to treat with contempt every appearance of innovation in theory or practice.

So that, till very lately, a person in America would be almost as much exposed to ridicule by attempting to teach the art of ploughing, as that of walking, or any other common animal function. But happily for us, since the revolution, some of the citizens of the United States begin to think for themselves, and to seek in their own country for improvements; and during the short period of twenty years since that event, greater advances have been made in American agriculture than in a century preceding.

Under these auspices, I am encouraged to hope that at least a part of the community will not condemn the following observations unheard. I wish my readers to divest themselves of every prejudice as fully as if they had never read a treatise on agriculture, or were acquainted with no system of practice, until they have fairly weighed the arguments; then compare them with their own experience, and according to their merits let them stand or fall.

The native soil of a great proportion of the United States, so far as I am acquainted, or have been informed, consists of a black mould from one to four inches deep (on river bottom, and other low places often much deeper) probably composed from leaves and other decayed vegetables. Immediately below this, is found a stratum of loam, clay or sand, most commonly loam, intermixed with some kind of stone. The mould or virgin soil is always found extremely productive.

The climate, with respect to heat and cold, is various; in the eastern and middle states, the frosts are severe, the surface of the ground being generally frozen for several months during winter; but their severity gradually decreases as we advance southward. In every part of the United States a considerable quantity of moisture falls in the winter and spring, in the different forms of snow, hail and rain: In summer, thunder gusts, with intervals of hot dry weather, are also common.

Let us now consider some of the most visible effects of the climate, on the lands in tillage.

The winter frosts are no doubt useful, in dividing and ameliorating the soil; repairing in some degree, the injury it sustained the preceding summer. During summer, a great proportion of the rains falling hastily, the consequence is, that wherever the ground is not opened to a sufficient depth, to imbide the whole before the surplus can have time to penetrate the hard *pan* beneath, a part of the soil becomes *fluid*; and if the surface is not a dead level, a portion of it, is carried off: the remainder has a tendency to settle into a *compact mass*, which, if suffered to remain, without stirring, through the hot, dry weather, that often succeeds, until the particles of moisture it contains, are evaporated, becomes of the consistence of a *sun dried brick*, and consequently impervious to the roots of vegetables.

These things being premised, I shall, without further observations, proceed to the subject matter, and endeavour to enumerate some of the evils inseperably attached to that great error in American agriculture, *shallow ploughing*; beginning with new lands, or those just cleared of wood.

What is the language of our farmers and planters on these occasions? Our soil is not more than

two or three inches deep; we must plough *shallow*, otherwise we shall turn up too great a portion of *dead earth*, and ruin our crops; they also say, we must plant *wide*, otherwise a drought will cause our corn to fire; and for these supposed weighty reasons, those two practices are almost universally adopted on new lands, to wit: shallow ploughing and wide planting.

Here our men of experience prove they are acquainted with the effect, without knowing, or even enquiring into the cause. Their mistaken opinion respecting dead earth, will be noticed in due place; but it remains here to be proved, that the necessity of wide planting, is one of the consequences attached to *shallow ploughing*. All plants imbibe moisture from the earth by their roots; if this portion of their sustenance is withheld, tho' every other species of vegetable nutriment abounds in the soil, the plant becomes sickly, growth ceases, and finally, death ensues. In search of the necessary supply, the roots of plants are extended in directions, where the soil is open enough to admit them, and to a distance, proportionate to the demand; two plants of the same kind, require a greater quantity, to preserve health, than one: hence it will appear, that a drought of sufficient duration to extract most of the moisture contained in that part of the soil, loosened by the plough, may yet leave sufficient to preserve one plant in health; but if divided, both must suffer, for neither can penetrate the hard unstirred earth below, for a supply. But in case of long droughts, no distance whatever, will insure Indian corn from suffering, when the under stratum is hard, and the ploughing shallow, and under these circumstances; few summers are so wet, but that close planted corn, at some period of its growth, discovers the want of a full supply of moisture, which perhaps might be amply afforded by one or two inches greater depth of ploughing. They have discovered, that after the first year, several succeeding crops will admit of being *closer* planted: the fact is, that the surface having now been for some time cleared of leaves, rubbish &c. and exposed to the action of frost, sun and dews, that portion of earth, lying originally immediately below the black mould, and called dead earth, which was turned up by the cultivation of the preceding year (for in common soils, it is almost impossible to plough so shallow as to avoid turning up some, in new grounds) has now acquired a dark colour, and therefore not known to be the same; and some of the obstacles to ploughing, being removed, they almost insensibly, go an inch or two deeper, without shewing any greater appearance of the yellow or dead earth, so much dreaded, than the preceding year: this furnishes a more extensive pasture, for the roots of the plants growing therein, and also becomes a more copious reservoir for treasuring up moisture for the needful time; and consequently affords a supply for a greater number of plants. The second year, is generally found to be much more productive than the first, after which our common lands gradually decline.

The undecayed fibrous roots prevent much loss of soil by washing, the first year, on lands not perfectly level; it generally begins the second, and continues annually. The ploughing being about four inches deep, does not afford a sufficient qnantity of loose earth, to imbibe the whole of the heavy showers that frequently fall during summer; the consequence of which is, as before observed, that when the open soil becomes *saturated*, water must accumulate on the surface, and flowing off in torrents, bears away a portion of the finest, and most valuable part of the soil; succeeding ploughings brings to the surface a fresh supply of mould, which in turn follows the last. Thus ploughing and washing alternately, following each other; the original soil is soon deposited in sunken places, beds of creeks, rivers, &c.

This waste is in some measure compensated, and fertility continued, by the fresh earth brought up from below; for the plough continuing to pass about the same depth, must of course descend into the unstirred earth, in proportion as the open soil is carried from the surface; but of this the cultivator appears ignorant; the proportion brought up at each ploughing, being small, and soon acquiring a dark colour by being exposed. I am fully convinced, that in many places the surface is now at least the whole depth of the ploughing lower than at first clearing: Of this we need no other proof, than the half buried posts in low places, the heads of rivers, creeks and mill-ponds filled up, which are every where to be seen in our hilly cultivated lands.

But, nothwithstanding the before mentioned supply of vegetable earth from below, the soil employed in cultivation, must annually become less fertile; because the coarse, the heavy and adhesive particles of earth, remain on the spot from the beginning, and those of the same properties contained in the fresh earth brought from below, also remaining, while the finer and more friendly parts, are continually carried away; at length the proportion of fine soil becomes too inconsiderable, to answer the purpose of vegetation to any degree of profit. Thus the land becomes sterile, not so much from the vegetable nutriment being extracted from the soil by the growth of plants, as by the soil itself deing removed; that this is a necessary consequence of *shallow ploughing*, on lands that are in any degree hilly, in this climate, I trust, has been satisfactorily proved.

[TO BE CONTINUED.]

Garden Work for December.

Cabbages, not already put away, may now be taken up and buried, or put under cover secure from rains and snows.

Small Salading, such as Brown Dutch, and Hammersmith Lettuce, Spinach, Kale, &c., must now be given a light covering of straw or brush, to protect them.

Planting of Trees may be done when the ground is not frozen, but they should be well mulched to keep the frost from the roots. The same may be done with flowering shrubs.

Prune Gooseberries and Currants, and plant the cuttings.

Tender Grapes and Raspberries may be laid down.

Strawberry beds should be cleaned, worked and manured with well rotted stable-manure, and the spaces between the vines covered with leaves or straw, and brush or corn-stalks laid over to prevent the leaves or straw from blowing away.

Clean up the garden, and put away under cover the bean poles, pea sticks, trellises, &c., and trench all stiff, hard soil, using plenty of manure.

Some persons, who want very early vegetables, prepare beds and sow Carrots, Parsnips, Onions, and plant potatoes. Cover over well with straw and in early spring remove the straw, and these seeds thus sown will soon come up and be some weeks earlier than the same sorts sown in spring. It is well to experiment on a small scale.

Cold Frames.—See that these are well managed, have enough of them, and let them be well stocked with lettuce, radish, cauliflower and other plants for maturing in winter or setting out early in spring. Nice loaf lettuce in January and February is a welcome dish on the dinner table.

The Fence Question.

Eds. Farmer:—My attention has been called to your article taken from my illustrated circular on the cost of fencing, in your issue of July 13th, and as you request a statement of how I would manage without inside fences, I will simply state that I do not allow a hoof to roam at will over my farm. I will call the attention of your readers, in my awkward way, to a few of the many disadvantages and expenses attending the pasturing system, and contrast them with some of the more prominent advantages of the soiling system.

1st. The expense of all the inside fences used on the farm, for the purpose of protecting the crops from stock allowed to roam over our lands, instead of protecting the stock from the crops. This expense includes the cost of the material used in fencing, and the labor of construction, which, according to the calculations made in my circular referred to, subjects the farmer to an annual tax of $1.41 for every 160 acres of land, estimating money to be worth six per cent., and in many parts of this State and in Central Ohio this calculation is claimed by good, practical farmers to be rather below than above the actual cost of fencing that number of acres.

2d. The labor of keeping fence rows clean of obnoxious weeds and briers, which are often allowed to ripen their seed, thus polluting the whole farm, and the fence corners are too frequently used as a place of deposit for old stumps and stones, and all manner of filth.

3d. The lost ground taken up by fences, which on many farms amonnts to a number of acres.

4th. The damage done to the soil and growing grass by the continual tramping of heavy stock; which is more especially noticeable on our heavy clay or limestone soils, which comprise our best grain-growing districts. To be convinced of this you have only to notice the barren and unproductive condition of an old roadway which may have crossed your farm, or the path across your field made by your children going to school or to a neighbors; or by pasturing one acre with heavy cattle, and mowing another acre in the adjoining field and feeding it to the same number of cattle. This experimeut would astonish many farmers.

5th. The damage sustained by your stock eating off the grass and clover, which should be allowed to grow, filling the soil with roots, which in all instances correspond in growth of the top, which, when plowed under will make your *land* fat, instead of your steer.

6th The great loss of manure by having the droppings of the cattle scattered over the hard fields, to be washed down the hill sides, or dried up and baked by the hot sun, rendering them as worthless for fertilizing purposes as the buffalo chips found on our Western plains, which are used for fuel by the emigrants.

I will now enumerate some of the advantages of of the soiling system, and perhaps the most important one is—

1st. The doing away with the expense of all permanent inside fences.

2d. The amount of valuable land brought into cultivation by dispensing with the inside fences.

3d. The great advantage gained in the accumulation of a large amount of valuable manure in the barnyard during the summer months, which would in a great measure be lost.

4th. The ability of keeping a much larger amount of stock, if desired, on the same amount of land.

5th. The advantage of having your stock near at hand, saving the time taken in driving them to and from distant pastures.

I will admit that the adoption of the soiling system will render it necessary to perform some additional labor; but I also claim that the cost of fencing and the other items of expense attending the pasturing system as practiced at the present day, would make an amount double what would be necessary to employ a good careful hand to perform all the additional labor created by the soiling system, leaving the advantages as clear gain. I am well aware of the difficulties attending the breaking away from old customs and habits, and establishing new ones. We are prone to do as our fathers did, without considering that they were surrounded by entirely different circumstances.

I would urge all farmers who live on good grain-growing farms to give the soiling system a trial, and when they become used to it they will say that it possesses many advantages which I have not mentioned. But should they not be prepared to endorse what I have said, and give it a trial, I would recommend, as an introduction to the true system, that they make use of a few pannels of some one of the many good portable fences now in use and fence the stock, instead of the farm crops, and in this way they will soon be surprised to see how little fence they can get along with.

In conclusion, I do not wish to be understood as advocating that farmers should abandon the pasturing of those rich but mountainous blue grass regions, or any other rough land, for it is on this class of land, and on our extensive Western plains, that our beef cattle should be *raised*, but fattened in the stables or yards on our rich grain-growing farms.—JOHN HAFER, in *The Ohio Farmer*.

Manufacture of Beet Sugar.

As the recent failure of the Calvert Refinery appears to have extinguished all hopes of reviving the business of converting raw imported sugar into the refined article, the parties interested in that valuable property certainly ought to devise some other use for it. The present condition of affairs affords an opportunity to inaugurate the manufacture of beet sugar, and the success attained by all the nations of Europe that have embarked in this industry proves the practicability of the enterprise. The exhibits of this description of sugar at the Centennial from France, Germany, Belgium and Russia were of excellent quality, and should have induced the starting of similar manufactories in this country before now. The Germans, in the hope of obtaining a supply of the raw product from the United States, are willing to pay at the rate of forty dollars per ton for properly dried beets for shipment. It is said that this would pay our farmers better than corn and require less trouble in cultivation. The beet root sugar from the Continent has caused the closing of most of the English refineries. because they are unprotected by a tariff, and the cheaper article has deprived them of a market. It would have the same effect in this country but for the tariff imposed for the protection of our Louisiana planters. — *Baltimore American*.

History of Beet Sugar in the United States.

BY ERNEST T. GENNET.

[CONCLUDED FROM PAGE 344 MD. FAR.]

In order to produce the quantity of sugar which is at present annually imported into the United States, it requires the average crop of half a million acres of land, and as the beets ought to be raised only once every four years on the same land it would give a rational rotation of crops to two million acres of land. These two million acres would be the standard which the farmer in the United States would look up to. But there would not only be one bushel of grain produced less, there is all reason to believe on the farms where this system was carried through the average crops of wheat would become the same it is in all the beet sugar districts in Europe; 35 bushels per acre instead of 11 bushels, which is the average in the United States. While by far the greatest value the beet sugar industry will bring the farmer, consists in the general improvement of his soil, he would have a cash crop of twenty-five million dollars annually and a feed crop in form of pomice of ten million dollars in addition to what he ever had before.

To work up this beet crop requires 800 sugar houses, and to erect these and furnish them with the necessary machinery will require the expenditure of 80 million dollars, every cent of which would go to our workingmen, mechanics and manufacturers, as we have all the material necessary in abundance, and certainly unemployed hands enough to make them rise as by magic from the earth. To work these sugar factories during winter will require 160 thousand mechanics and laboring men. These figures are not imaginary; they are illustrated in every country in Europe. The consumption of sugar is steadily increasing as civilization progresses, and population increases. Fifty years ago beet sugar made its appearance on the world's market, and has so steadily gained that there is not the slightest doubt that in 1880 more than one half of all the sugar produced in the world will be beet sugar. No country in the world is known where the beet sugar industry once had a foot hold, where it has not steadily extended to the unmistakable benefit of the farming community. It is an indisputable fact that during the last five years of business stagnation the world all over, there have been but two articles of which the demand has been greater than the supply; and that has been raw sugar and gold. The price of raw sugar is steadily on the increase.

As slavery is abolished by advancing civilization the production of cane sugar becomes less, and this will be the reason why the main supply from Cuba in no very distant day will cease, and the United States will look for their supply of sugar to Europe! Are we then still to continue the exchange of agricultural products with Europe by giving them the product of eighteen acres for the return of their crop of one acre? And if we should be improvident enough to be willing to do so, how long can we expect this to continue? The centre of grain raising in the United States has gone most systematically and steadily as the sun towards the West. How long can it last till it reaches the natural limit, the Pacific Ocean? The great difficulty why the beet sugar industry in the United States had so hard a struggle to gain the first foothold was because our system of farming, or to give it the right name, our system of spoliation is antagonistic to the production of root crops, hence the raw material has been lacking. To raise a root crop successfully it is almost indispensable to subsoil the land so that roots can enter the soil to the requisite depth, but systematic subsoiling soon brings tile draining. In fact the introduction of beet sugar means the beginning of a complete change of system, and this requires more than the detached effort of a few individuals; it requires the organized effort of most of our leading agricultural men.

Within the last few years some Governments other than in Europe have made some effort to introduce the beet sugar industry in their States. The Province of Quebec offered some years ago a yearly subsidy of $7,000 for ten years to a successful beet sugar manufacturer, which was followed by a similar offer from the State of Maine, while during the last year the Government of New Zealand has offered a bounty for the first beet sugar made there. Although these bounties to be paid to successful manufacturers can not be called assistance to introduce the industry in the full sense of the word, yet they have done a great deal to draw the attention of those interested in it again to the subject.

This sketch could not be considered complete without referring to the effort made in the State of Maine to start the beet sugar industry on different principles than ever before attempted.

In the spring of 1878 a company was formed in Portland which, while every leading man in it is a practical sugar manufacturer, they decided to leave the farming or agricultural part entirely to farmers. In order to guard against a possible failure from local causes the company extended their operations all over the State, any one geological formation, would produce a superior beet than another. The contracts for raising beets made by the company were with nearly eight hundred farmers for an extent of land ranging from one-fourth of an acre to ten acres; from the most southern point of the Saco valley to the northern part of the Aroostook valley. Besides these farmers who entered into contracts for cultivation of sugar beets, about one thousand farmers have planted sugar beets in the State of Maine, as an experiment, on land ranging from a few rods to half an acre. The readiness with which so large a number of farmers entered into the enterprise on so short a notice, proved that the farmers were ready and anxious to do their part to introduce the beet sugar industry in the United States if only the manufacturers and capitalists would do theirs.

Where the beets have been planted on well manured and good cultivated land, the crop promises a fair yield, in many cases, by far better than farmers expected. Where they have been planted on worn out, poorly cultivated land, they have proved a failure; they have not been able to withstand the drought and heat, and have perished. A number of farmers who have cultivated but one or two acres this year, have expressed their readiness to enter into a contract next year for ten and more acres.

It is too early to state, with any kind of certainty, the quantity of beets which will be harvested, yet there is no doubt but the yield will a be fair one.

More important than the quantity of this year is the quality of the beets. Nobody doubts that with proper cultivation large quantities of beets may be produced; and if half a million of acres will not supply the sugar required in the United States three-quarters of a million will. But the quality, which depends upon climate, soil and many other minor circumstances, is not so easily controlled, and therefore of great importance. Ever since the 15th day of July beets have been analyzed by the Maine Beet Sugar Company, and in giving the result of four different but well cultivated fields, the question as to quality may be considered settled.

The beets from four different fields analyzed had been growing, from the first day the seed was planted, until the 1st day of August, respectively 76 days, 66 days, 59 days and 46 days.

The first had Aug. 1st to solids in 100 juice 10 80 per cent., sugar 6.70 per cent.

The first had Aug. 15th to solids in 100 juice 13.50 per cent., sugar 9.90 per cent.

The second had Aug. 1st to solids in 100 juice 11.00 per cent., sugar 6.90 per cent.

The second had Aug. 15th to solids in 100 juice 13 80 per cent., sugar 10.70 per cent.
The third had Aug. 1st to solids in 100 juice 8.80 per cent., sugar 5.30 per cent.
The third had Aug. 15th to solids in 100 juice 11.40 per cent., sugar 8.00 per cent

The sugar begins to develop after the expiration of the first half of the regular time of vegetation. These results compared with results in Europe of the same duration of vegetation, prove the beets grown in Maine so far fully as good as the best in Europe.

It cannot be denied the final result of Maine enterprise will largely influence the introduction of beet sugar industry in many other states of the Union.

For the sake of many thousand unemployed working men, for the sake of many thousand farmers who know that their only salvation lays in the more rational cultivation of their homesteads who know that without rational rotation of crops improvement is impossible, let us hope the enterprise in the state of Maine will succeed.

What the beet sugar industry has done for every country in the world wherever it has been introduced, it will undoubtedly do for the United States. No nation in the world, so history teaches us, was ever great and prosperous without prosperity in agriculture. Julius Ceazar could conquer half the world, but he could not prevent the decay of farming, and, with it, the downfall of the Roman Empire. The decay of Spain conclusively proves the decay of agriculture in Spain. The downfall of every nation has been invariably preceded by non-productiveness of its fields.

Domestic Manufacture of Beet Sugar.

We give below a concise, practical letter of Mr. ANDREW H. WARD of Mass., written for the "Bridgewater Independent," showing that every farmer can grow beets profitably and make all the sugar needed for home consumption at but little expense, and that it is as easily made as maple sugar. The pomace would pay well for growing the beets, in feeding cattle and hogs. The juice made into sugar would be clear profit:

"In reply to "Bleizucker's" communication of April 25, I will say the difference in making sugar from beets and from maple sap is, that the juice has to be first extracted from the beets; this does not require more costly machinery than the cider press and grater—that made by the Boomer and Boschert Press Company, Syracuse, N. Y., (I send you one of their circulars, giving plan and cost of building, press, grater, elevators, engine and boiler, tanks, pumps, etc., the whole cost of which is $2,360), has a capacity, with the labor of two men, of grating and pressing 725 bushels of beets per day of ten hours, and yields 5,262 gallons of juice. The press and grater alone costs $510, and requires less than six horse power to run them. The beet juice is boiled down the same as maple sap, sorghum or cane juice, and requires no more labor or skill, and can be done as economically on the above quantity as on a large amount. It needs no costly machinery, such as "centrifugals, hydraulic presses, vacuum pans, or filtration through bone coal, etc." These and other requisites are all needed in the *refining* but not in the *manufacture* of sugar; they are separate branches of business, but sometimes both are carried on by the same person. The sugar refineries in this country import the brown sugar, and refine it. They would without question, as readily buy the brown sugar made here, as to import it; and, refineries being already established, it is better to send the brown sugar (what is not consumed in that form) to the refineries that already have the necessary machinery and skilled labor to run them, than to start new ones; it would be a question of cost of freight against the interest on capital invested in refinery. At present, there is no doubt it would be best for the farmer to sell his surplus sugar not needed for home consumption; or, if refined is wanted, he can sell his brown sugar and buy refined, as the farmer now sells his wheat and buys his flour, or has it manufactured for him at the mill.

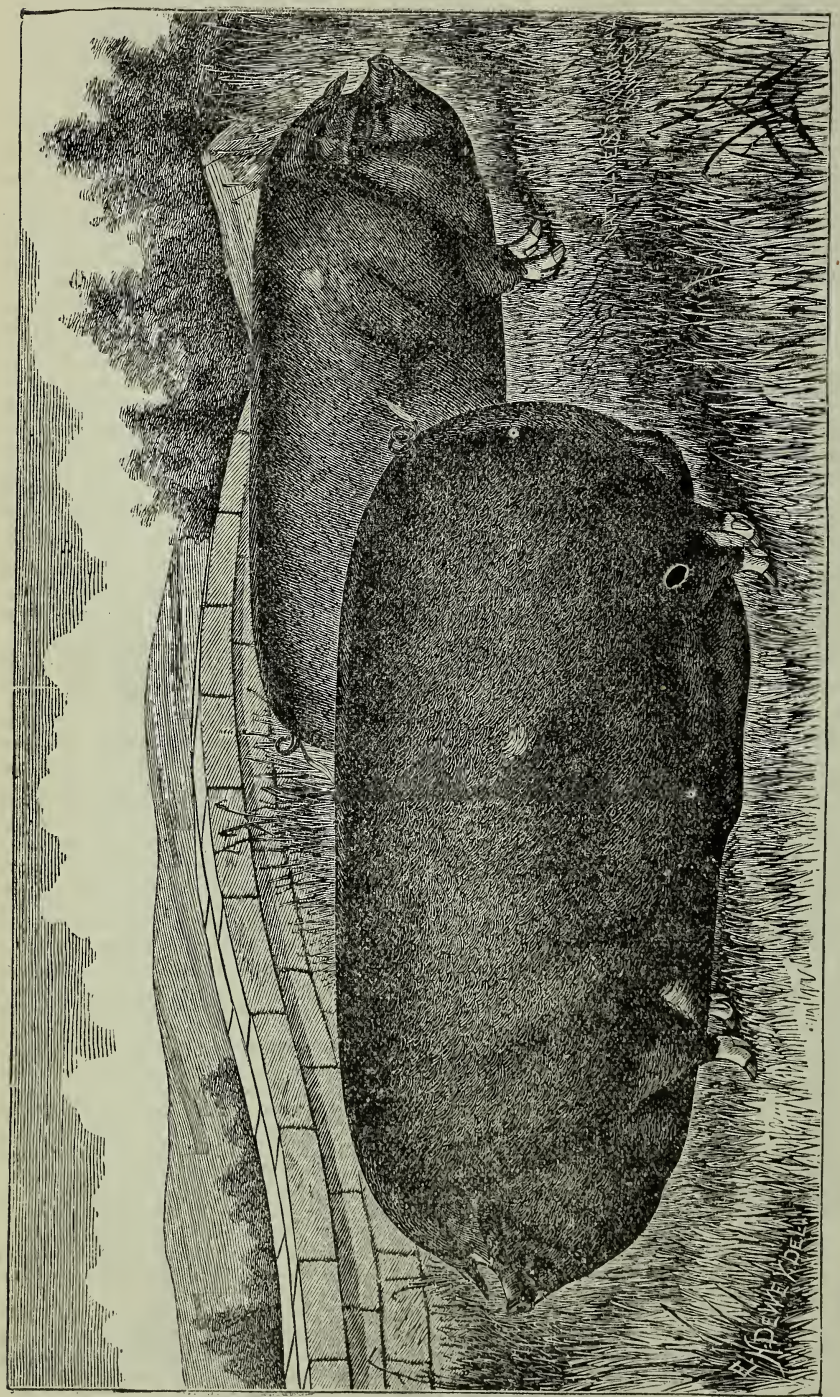
In the future, as the business grows, the present refineries will not be able to refine all the brown sugar produced here, and then there will be no difficulty in getting the capital and skilled labor to start other refineries in locations best adapted for them, or to enlarge the producing capacities of the present ones; time and circumstances will regulate this.

1 000 lbs. beets contain 184 lbs. dry substance, 1.60 nitrogen, 7.10 ashes, 3 914 potash, 0.379 lime, 0 536 magnesia, 0.780 phos. acid. In manufacturing, these elements are distributed as follows:

	d. s.	nit.	ashes.	pot.	lime.	mag.	p. acid.
Tops & Bottom	19	0.24	1.15	0.336	0.108	0.132	0.144
Fibre	46	0.44	1.71	0.585	0,390	0.100	5,165
Refuse	24	0 60	1.20	0.380	8.640	0.250	0.380
Molasses	25	0 32	2.47	1 741	0.141	0.009	0.015
Sugar	85		0.57	0.872		0.040	0.072

"Bleizucker" well states, "If farmers and others interested can be incited to investigate for themselves the real facts in regard to raising sugar beets and the manufacture of sugar from them, much good will be accomplished" The estimated quantity of the sugar supply of the commercial world in 1875 was 2.140,000 tons cane sugar, and 1,317,623 tons beet-root sugar, of which France produced of this last 426,259 tons, as against 4,465 tons in 1828. The consumption of sugar in the United States is about 700,000 tons per annum, of which we now produce—cane sugar, 100,000 tons and beet-root sugar 1,000 tons, and there is no reason why the last cannot be increased to the quantity we require, *if the farmers will raise the beets.* The present cider mills and cheese factories could add to their present machinery the pans or presses as required, and by co-operation on this, as in regard to other products, we can produce *profitably* all the sugar we need. This will bring the business of sugar making within the reach of small farmers, and is of vast importance. The notion prevails, that to make sugar profitably it must be made extensively. This is certainly erroneous; and the sooner we will begin to realize the productive resources of our lands, and employ our now idle laborers on a very remunerative crop now grown to a very limited extent.

In the last 100 years great progress has been made in all branches of manufacture, and it applies to sugar as well as other articles. We can profit by the past, but need to look forward to the future."



MAGIE OR POLAND CHINA SWINE.

OWNED BY THE D M. MAGIE CO., OXFORD BUTLER COUNTY OHIO.

Live Stock Register.

Origin of the Magie or Poland China Swine.

The Company say:—It might be interesting for Swine Breeders to know the origin of the Magie or Poland-China Hogs. Mr. D. M. Magie, the senior member of our firm, originated this breed of Swine from the years 1837 to 1840, inclusive. They were produced from four pure and distinct breeds of hogs, viz: Poland, Big China, Irish Grazier and Byfield.

Our hogs are of fine bone, but large size, combining more eminently than any other the excellencies of both large and small breeds, being docile, very good feeders, breeders and sucklers, fattening readily at any age and yet attaining great weight at maturity.

They sometimes dress 350 lbs. at from 10 to 12 months old. From 18 to 20 months old, 500 to 600 lbs. They have long bodies, short legs, broad straight backs, deep sides with square heavy hams and shoulders. For purity of blood and good breeding, these hogs are unsurpassed by any other breed. They are large and fine, and dark colored have drooping ears, are of very fine style and may be relied on. Many people know these hogs by the name of Poland-China, others by the name of Magie, and some as Butler Co., and Warren Co. hogs; but in their pure state they are the same breed of swine. They have been an establisheed breed for about 35 years. The experience of the best breeders of swine in this country, that have bred and experimented on the various breeds of note, have in every instance, where it has been our privilege to be acquainted with the parties and circumstances, decided that the Magie or Poland-China hogs are much to be preferred above all others.

Suggestions for Intending Breeders.

The man with a hobby is usually looked on with a little suspicion or ridicule; but if not allowed to run away with him, I strongly believe the possession of a hobby is a good thing, and for few men more so than for the farmer. If he gives his whole attention to the hobby, it is a bad thing to have, but wisely managed it may be, and often is, a means of making the routine work of the farm pass off pleasantly, because this is made to bear on the success of the hobby. Suppose a farmer takes so much interest in destroying weeds that his neighbors say he makes a hobby of this; is it not a help to his farming in almost every way? He will give better cultivation to his crops; will keep his fences in better shape; and will probably be be more ready to do needed drainage.

Of all this class of hobbies I know of nothing so well calculated to interest the mass of farmers as the breeding of fine stock—and by fine stock I now mean simply that which is, or is believed to be, better than that surrounding it. There is a pleasure to most minds in watching the growth and development of either a plant or an animal, but with the larger number the animal has the preference. In either case the pleasure is much increased if there is the belief that, through his own skill or effort, the owner has secured more than usual excellence.

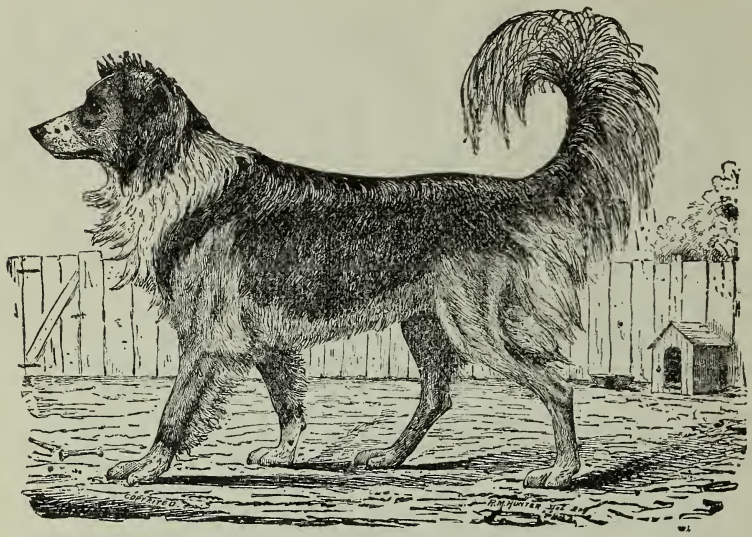
In the largest number of cases the best course to pursue is to select as good specimens of the common stock of the vicinity as can conveniently be secured, and "grade up" by the continued use of well-bred sires, but in a very large number of cases it is entirely practicable and advisable for farmers in a small way to be breeders of pure-bred stock of some class.

It is rarely wise for a beginner in breeding, certainly if he have but little capital, to invest in rare or little-known breeds. There are but few men who are well adapted to the work of introducing and securing popularity for a breed of animals. The average farmer cannot offord to do a great deal of missionary work. I would always select a well known and popular breed, unless firmly assured the new one is very much superior.

Almost absolutely without exception it is unwise for any except those with considerable capital and somewhat large farms to engage in breeding more than one breed of a class.... The first expenditure had best be comparatively small; especially is it unwise, although not uncommon, for a beginner in breeding to erect large and costly buildings for his stock. So, too, it is not necessary to buy a large flock or herd at first. It is more satisfactory to grow as a breeder than start out full-fledged. By selecting two or three, at most a half-dozen females, one is able to secure greater uniformity in his future herd, and can feel that its merit will be largely due to his own efforts. Any one with money enough can buy good animals, but the pleasure in the ownership of such must be less than where one can say, "The entire herd is my own breeding." Even with cattle but a few years will elapse before a fair-sized herd will have grown from even two or three cows, and with the increasing herd has come increased experience in its management and the sale of the surplus.

While extravagant prices are not advisable, especially for the beginner, it is better, as a rule, to let the foundation be really good. It is better, unless marked differences in price exist, to buy the foundation stock for a pure-bred herd not only of a popular breed, but of popular families in that breed, and of well-known breeders.—G. E. M. *in National Live-Stock Journal.*

Imported Scotch Collie, 'LADDIE," Imported and Owned by D. Z. Evans, Jr.



Scotch Collies.

Herewith we give a cut of a fine specimen of a Scotch Collie shepherd dog, *as he really is*. This cut was taken from a sketch of "Laddie" from life by the eminent artist, Mr. Wm. Wilcox, of Philadelphia, Pa., who is now engaged in making a handsome oil painting of this fine dog. This breed of dogs has been bred for so many years for usefulness, it now stands unrivalled. Farmers, stock breeders and poultry fanciers are gradually finding out their great value, and the demand for well bred pups of this breed is rapidly on the increase. They daily save their masters hundreds of steps aud much annoyance in herding and driving the stock, while they are unexcelled as watch and farm dogs.

The most satisfactory way to do in purchasing a Collie, is to buy a pup, instead of a full grown dog, and then accustom him or her to your particular way of having things done, and you cannot find any reasonable fault with the way he takes to his work, for well bred ones are noted for their matchless intelligence ; the expression of the eyes and face denoting a mind capable of an almost endless amount of training. They are natural sheep and stock dogs, but must be first taught how you want the work done and must get acquainted with the stock and the stock with them, before you can expect them to do their duties satisfactorily.

They are a very affectionate animal, but know full well where to place their affections.

Full grown, well developed specimens of Scotch Collies measure in height at the shoulder from 18 to about 22 inches. In the rough coated kind, the hair is full and heavy, and from that to a heavy brush, and is carried over the back when in excitement. Many prefer the smooth coated Collies, while others like a cross between the two, all of them being equally good in point of usefulness. Colors are various, ranging from a black and white; black, tan and white ; fawn and white ; black and tan, to irregular mixtures of the colors named.

Success of Maryland Berkshires.

Bel-Air, Md., Nov. 15th, 1878.

Editors Md. Farmer :—Thinking you would like to have a list of the winnings of my herd this year, I enclose the following list of them.

Very truly, ALEX. M. FULFORD.

At the fairs this season, my stock has taken the the following premiums : At the Maryland State Fair, six first premiums ; at York, Pa , five first and two second ; at Frederick, Md., seven first and one second ; at the Virginia State Fair one first and two second ; at the North Georgia Fair, Atlanta, two first and two sweepstakes ; two of my animals winners at the last mentioned place,and there sold were exhibited and won first prizes at the Georgia State Fair, making a total of thirty premiums won by my exhibits. All but three animals shown by me, were bred by me, and these three have long been used in my herd as breeders.

AYRSHIRE CATTLE.

Long Island, N. V., October 23rd 1878

Eds. Maryland Farmer:

MY DEAR FRIENDS :—As requested, I send you the cut of my old Ayrshire cow, "Belle of Beaven" imported and bred by James Finly, Monkland, Scotland, and herewith send you notes how to judge a good Ayrshire cow, as I believe they are the farmers' cow of to-day—please attend to the points.

Her head should be short and her muzzle good size ;
Her nose should be fine between muzzle and eyes;
Her eyes full and lively ; her forehead ample and wide ;
Horns wide, looking up, and curved inward beside ;
Her neck should be a fine tapering wedge,
And free from loose skin on the undermost edge ;
Should be fine where 'tis joined with the seat of the brain ;
Strong and straight upon loin without hollow or mane ;
Shoulder blades should be thin where they meet at the top ;
Let her brisket be light nor resemble a crop ;
Her fore part recede like the lash of a whip,
And strongly resemble the bow of a ship ;
Her back short and straight, with the spine well defined,
Especially where back, neck and shoulders are joined ;
Her ribs short and arched, like the ribs of a barge;
Body deep at the flanks, and milk veins full and large ;
Pelvis long, broad and straight, and in some measure flat ;
Hock-bones wide apart and not bearing much fat;
Her thighs deep and broad, neither rounded or flat ;
Her tail long and fine and joined square with her back ;
Milk vessel capacious, and forward extending ;
The hinder part broad and to body fast pending ;
The sole of her udder should just form a plane,
And all the four teats equal thickness attain ;
Their length not exceeding two inches or three ;
They should hang to the earth perpendicularly ;
The distance apart, when they are viewed from behind,
Will include about half of the vessel you will find;
And when viewed from the side they will have at each end
As much of the vessel as between them is penned;
Her legs should be short and bones fine and clean;
The points of the latter being quite firm and keen;
Skin soft and elastic as the cushions of air.
The colors preferred are confined to a few,
Either yellow or brown, mixed with white ;
The weight of the animal leaving the state,
Should be about 600 pounds sinking offal.

Such are the points given by the Ayrshire breeders who have now bred them for over a century, and one-half the Ayrshire dairymen knows what it is to have a producing cow ; not *fancy* they live by, but by *produce* of the best dairy cow, and I believe such is fast becoming the practice in this country, as the Ayrshire is more sought after year by year and where they are kept for practical use, the owners will not part with them.

Respectfully yours,

WILLIAM CROZIER.

HEREFORD CATTLE.

Though the Hereford breed of cattle has not as yet been exclusively introduced into this section of the country, its excellences are commanding the situation at many other points, notably in England, Australia, South America and in our own western country. It is a matter of record that not only in the London market have they been quoted from one to two cents a pound above the Short-horns, but the records of the Smithfield show will witness that the Hereford steer has a record over the Short-horn, and the same record shows that the Hereford steer has made as good weights as the Short-horns, at any given age. And now the Bath and West of England Society has awarded the two champion prizes, for best male and female in the show, to the Herefords. Coupling this with the fact that during the same record he has always brought better price, and another established fact that he has always been a more economical feeder and grazer, is it not strange that the press and agricultural societies have not been more ready to encourage them?

A recent sale of 100 Hereford bulls in England for shipment to the grazing regions of Buenos Ayres, shows the estimation in which this famous stock is there held. The Herefords have made more rapid progress in public favor at the West in the last five years, than ever was made by any other breed of cattle in America in the same time. In Colorado and Wyoming, there are several herds of from 20,000 to 60,000 head, that are using all the Hereford bulls they can get ; and already at the Union Stock Yards at Chicago, and at the St. Louis and Kansas City Stock Yards, these steers are commanding the top prices, while five years ago they were not known in these yards. In five years more they will be quoted at all of these markets, as they have been in the London market in England for the last 100 years or thereabouts.

The Hereford cattle are tough, hardy and thrive on a diet both in quality and quantity that would be unprofitable in the Short-horns. The cattle are very large sized, make excellent beef, are fair milkers, especially when crossed with other kinds, and are withal quite handsome being red bodied

with white markings and a white face, the latter being an invariable mark of the kind. Among the herds of cattle, exhibited at the recent New England Fair at Worcester, none attracted more attention than the herd of Herefords owned by J. S. Hawes, of South Vassalboro, Me. He showed thirteen Herefords, among which was a thoroughbred bull, "Highland Chief," the largest on the grounds, but five years old and weighing 3 000 pounds, having a length of eleven and a girth of nine feet, one bull and two heifers, also three calves, five months old, which he engaged to parties who design sending them to a ranche in the West, where they are breeding stock to ship to England. The price stipulated was $300 for the trio, The Hereford cows, on exhibition weighed between 1,500 and 1,600 pounds. An enlarged popularity in this country is predicted for the Hereford breed of cattle—*American Cultivator.*

For the Maryland Farmer.

Sheep and their Profit.

Messrs. Editors:—You know I had, in by-gone days, somewhat of a sheepish reputation; I believe most farmers think there is profit in sheep, I agree with them in the fact, but differ as to the best mode of obtaining the most profit. The present plan pursued is to purchase a lot of common (Western) ewes in the fall, put a buck with them, and in the spring sell the wool and also the lambs; this certainly gives good profit on the sum invested. The ewes and lambs are low priced and takes a number of months to make a small sum clear, but if they are satisfied, it is all well—my plan was different, I bred from thorough bred Cotswold bucks, saving the best ewe lambs until I had a flock pretty deep in the blood. I sold a lot of muttons the fall after one year old from grass for $10 each, their fleeces were heavy and paid well for their keep; their droppings more like calves, and of course richer fertilizer. I ascertained clearly the saddles of this lot of muttons sold for $35 each, the Hon. Daniel Webster bought several of them. The next lot I sold from grass, some one year old, some two, for $35 and $25 each for New York market, all my sales were on the farm. After they reached New York, the butcher propsed contracting with me to give me $100 for each mutton I would bring to their weight, which I could easily have done—the war broke it all up. Three of my part bred muttons were fattened for a rival contest at 2 years old; one weighed alive 322 pounds, dressed 234 pounds, the other two were twins, one weighed alive 285 pounds, dressed 202 pounds, the other weighed alive 286 pounds dressed 192 pounds, and sold all for $1 per pound. I had a yearling buck that weighed 430 pounds alive. If my plan is not the most profiable to me, there was pleasure in oceserving and breeding such sheep.

Berryville, Va., Nov. 4th. J. W. WARE

HORTICULTURAL.

GRAPE CULTURE ON THE POTOMAC.

A Paper read before the Potomac Fruit Growers' Association

BY ROBERT A. PHILLIPS.

As this association is named and known as "The Potomac Fruit Growers," while we are sailing down the beautiful river whose name gives us, as a society, our identity, it is a very proper occasion to inquire what kind of fruit these beautiful shores will produce with the greatest success as to quality and profit. I believe that, at no very distant day, it will be determined that the preference will be given to the particular fruit which has been selected for our consideration. History informs us that from the earliest ages the cultivation of this luscious and healthful fruit has received more attention than all the other fruits of the earth which the Creator gave for our sustenance, our pleasure, and our health.

Grape culture has been a constant attendant upon civilization, following it from country to country, each country having its own peculiar indigenous varieties. When our own favored land was discovered by the noble Columbus, the most important of all its fruits was the grape, many varieties of which were found growing in great luxuriance, and yielding annually bountiful supplies of their delicious clusters, to delight the savage aborigines, who were as new a variety of the the human race as were the new varieties of this fruit, thus, for the first time, made known to the other inhabitants of this great world in the Eastern hemisphere. Of the native grapes of this country, none have been found, however, that favorably compare with some of the better sorts grown so extensively in different parts of Europe, and in some of the Islands of the sea. Except in a few isolated cases, the same species of vine that thrives so well there, has entirely failed in this country, and after many years of patient labor in importing, and experimental trials, all hope of successfully producing them in the open air has been abandoned with, I may say, the exception of southern California. And although we may regret that the European grape is unsuited to our climate, yet we may congratulate ourselves that we have indigenous species from which new varieties have been produced which rival in point of *flavor*, at least, any of the foreign ones. And we are enconraged to hope for an improved native grape which shall equal the European grape in every good quality. Cultivators of the vine in this country have had very many obstacles to contend with. Those who had been accustomed to the fine grapes of Europe, could see nothing in the inferior native grapes of this country to induce them to cultivate them, and for many years the vineyards in this country were exclusively planted with foreign varieties, which invariably failed, and the vineyardist believing there were none of our indigenous vines worthy of his attention, replanted again and again with new importations from the choice varieties of other countries, principally from Europe, and found his trouble as often rewarded

only by disappointment and failure. After two centuries of unsuccessful attempts to grow the foreign grape in open culture in this country, pomologists turned their attention to the improvement of our native species of vine, and their experiments have been crowned with success in giving us many choice and beautiful varieties. It is only since foreign varieties have been discarded for our hitherto neglected native sorts that vine culture has become established as an important branch of American industry, and is rapidly increasing annually. Thousands of pounds are now produced where one pound was grown only twenty-five years ago, and this beautiful and healthful fruit being now within the reach of all, its consumption has increased as rapidly as its production, and during its season of ripeness the grape has become the *favorite* fruit of the million, thousands of tons finding their way to our cities and towns, where a ready market awaits them for a table fruit; and thousands of tons are annually made into pure and healthful wine, and it is to be hoped that it will be so extensively manufactured that it will, ere long, be substituted for the much more intoxicating spirits so much used in this country, and so little used in the extensive wine producing countries. I will now give you a short sketch of my own experience in vine culture, near Washington. At about the close of the war, in this country, I purchased several hundred acres of land within sight of the Capitol, and in looking it over. to determine for what the soil was best adapted, I discovered a great many wild, native grape vines, of most luxuriant growth, many of them running to the top of the highest trees, and some as large as six inches in diameter near the ground. Nature could not speak more plainly. I determined to plant a vineyard, believing that cultivation would certainly show as good results as nature unaided. I procured two-year old vines, at a fabulous cost, as they were then scarce, high, and in great demand, and planted a vineyard of only about three acres After having prepared the ground carefully and thoroughly, by ploughing and subsoiling to a depth of about sixteen inches, the ground having a moderate slope to the east and southeast, planted eight feet apart each way, setting a stake at timeplanting to each vine, and cutting the vines back to witnin about six or eight inches of the ground, running the rows across the hill and mixing with the soil, about the roots, of ground bone about one quart to each vine; when they had grown sufficiently to determine the strongest shoot, the rest were all rubbed off aud but one shoot allowed to grow that year. The next year the vine was again cut down, leaving but two eyes of the previous year's growth and the canes allowed to grow about four or five feet long and were thus pinched off at the terminal bud to make more stocky and stronger canes. The third year the experiment becomes interesting. The year has arrived in which we may expect to realize the result of two long years of labor, hope and patient waiting. The stakes are removed and instead, a wooden trellis is erected, the two canes of each vine are extended like two arms along the bottom of the trellis. All this time the ground has been well worked and kept clear of weeds and grass. This third year each bud becomes literally a "bud of promise," and all are allowed to grow, and as they grow each shoot bears from three to four bunches of grapes, and as the vines reach the top of the trellis a beautiful sight is presented, each row forming a step-like terrace across the side hill. When September 1st was reached the grapes were ripened perfectly, and my experiment proved thus far a great success. It was the first vineyard planted in that vicinity and attracted a great deal of attention, especially at the time when the first crop ripened. A great many people came to see, and all expressed gratification and surprise upon beholding such a beautiful display of the most perfect clusters of grapes. An extensive fruit dealer of Washington admired them to the extent of purchasing the entire crop at 15 cents per pound, probably the highest prices ever brought in the United States, on the vine, An unusual number of gentlemen called one day, at this time, to see the vineyard, to whom I suggested that as there was so much interest manifested in fruit culture, we should organize a fruit growers association, which suggestion, meeting the views of all present, a meeting was appointed to that end at my house the next week, Monday, it being September 14th, 1868. Although the day was unpropitious, dark and rainy, thirteen gentlemen assembled in my parlor at North Arlington, and then and there was born "The Potomac Fruit Growers' Association."

A very important point to be considered in planting a vineyard is the varieties to select for planting. Among the eighty native varieties found in this country, not including a great many new seedlings and hybrids, there are indeed but few that combine the most desirable qualities for the table and for wine, and none that combine so many good qualities as the Concord. It has been styled "the grape for the million." It is very hardy, a very prolific bearer, and has done better in this latitude than any other variety. How long it will justify so favorable mention, it is difficult to say, as it has decaded to a very serious extent, while in the process of ripening, for several years, the last year it having proved nearly a failure. But this experiment has proved that the Potomac region may become as noted in America for its extensive vineyards as the Rhine, the Rhone, the Seine, and their tributaries in Europe.

> "The vine too, here her curling tendrils shoot,
> Hangs out her clusters glowing to the South,
> And scarcely wishes for a warmer sky."

The vineyards of Europe are composed solely of the varieties of a single species of the vine, *and that* a foreign one, transplanted to her soil, In our own country numerous species and varieties are everywhere met with, springing up spontaneously in our woods and prairies, nature's own gifts, unaided by culture or toil. Something of the extent to which the vine is grown in Europe can be estimated by some facts in that connection concerning its culture in France where two million laborers are employed in cultivating five million acres devoted exclusively to grapes. The vine flourishes throughout onr broad land from the St. Lawrence to the Gulf of Mexico, and from the shores of the Atlantic to the Pacific, a though some sections have been found much better adapted to particular varieties, because of difference in soil and climate and other conditions.

THE

MARYLAND FARMER,

A STANDARD MAGAZINE.

DEVOTED TO

Agriculture, Horticulture & Rural Economy.

EZRA WHITMAN,

Editor.

COL. W. W. W. BOWIE, Associate Editor.

141 West Pratt Street

BALTIMORE.

BALTIMORE, DECEMBER 1, 1878.

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FIFTEENTH VOLUME OF

THE MARYLAND FARMER.

This is the 12th number of the 15th volume of THE MARYLAND FARMER; and we claim it has been published longer continuously, without cessation, by the same publisher, than any other farmer's journal in this or other States south of Philadelphia.

A *popular* magazine,—as attested by our subscription list, frequent kind letters from parties, and the notices of our brethren of the press in this and other Southern States,—and is also a *great advertising medium*, as shown by the numerous new advertisements in the present number.

During the coming year, we shall allow nothing to prevent our making it superior to all former issues, and maintain beyond dispute its high character.

Its aim will be to admit nothing in its columns like Theory, unless based on science controlled by reason; nor anything called Practical, unless proved by successful experiments.

If our old subscribers will do us the favor to canvas for THE MARYLAND FARMER, by showing it to their neighbors and soliciting the subscriptions, they will confer a great favor on us, and we do not doubt, confer a greater profit on the new subscriber.

☞Our friends can do us a good turn by mentioning the MARYLAND FARMER to their neighbors, and suggesting to them to subscribe for it.

☞We call attention to our Reduction in Price of Subscription.

YOUNG MEN!

It is an easy way to make money by getting subscribers for THE MARYLAND FARMER. Send 15 cents for Specimen Copies, and ascertain what Liberal Commissions we will allow.

ADVERTISERS.—While we are gratified to perceive from the large number of advertisements in the MARYLAND FARMER—increased monthly—that our journal is appreciated as a profitable medium, yet we are surprised that Farmers who have stock of all kinds for sale do not advertise more freely; merchants properly estimate the value of advertisements, while farmers lose hundreds of dollars by not doing as the merchants do. We have daily enquiries where poultry, eggs, sheep, cattle, horses, &c. are to be had, and at what price. We can not answer in all cases. It is true we have an agency ourselves for the purchase of such articles, but we would have our patrons deal personally with the owners, who advertise,

ATTENTION! SUBSCRIBERS!

SUBSCRIPTION REDUCED TO $1.00 A YEAR, IF PAID IN ADVANCE.

Our subscribers will find in this number, our *Prospectus for* 1879, and please notice the important change in the price, being a reduction to $1.00, if paid in advance. While we thus reduce the price *one-third*, we hope not to suffer loss by it, believing that our subscription list will be thereby more than doubled, satisfied that our friends will sustain our efforts in lowering prices to suit the times, by each one exerting himself to get one or more names to swell our roll of subscribers. Thus our subscribers reap the advantage, while we may not lose.

It was 15 years ago this month,—in those dark days of 1863, the MARLAND FARMER was started by myself, with Col. S. S. Mills as associate. At that time it was considered a hazardous attempt to begin the publication of an agricultural paper in this city. The *American Farmer* and the *Rural Register*, both good papers, having failed to sustain themselves and had become *extinct*, and the farmers of Maryland were left without an organ.

My life having been spent in agricultural pursuits, and in efforts to perfect the adaptation of agricultural machinery to the wants of the farmer, I felt that my interest and that of the farmer and planter were closely connected, and hence farmer and mechanic should have some journal in Maryland suited to their wants The MARYLAND FARMER was thereby started, and has continued to this date, under shade and sunshine, with no rival *for* 10 *years* in its field of usefulness—battling for the rights of farmers at great cost of labor and money, and regardless of consequences; so it received the approval of those who patronize it.

In returning thanks to our host of well-tried and valued friends for their past support, we feel safe in saying to those who may become new subscribers, that if they refer to our old ones they will be assured that we have maintained the promise given in our first appeal to our readers in 1864—"Our desire is to make the 'Farmer and Mechanic,' a welcome guest at the fireside, and a suggestive companion in the field and workshop." We proudly say we have fulfilled, and more so, our promise thus given fifteen years ago.

E. WHITMAN,
Editor and Proprietor.

International Dairy Fair, commenced on the 2d inst., and will continue for six days, at the American Institute, New York city. It is one of the most important fairs ever held in this country.

The Commissioner of Agriculture.

We give the following extracts from a late editorial of our highly valued cotemporary—"*Our Home Journal*," of New Orleans, in defence of Gen. LeDuc:

"Not very long ago we entered our earnest protest against the senseless abuse which it has become fashionable to bestow upon Gen. LeDuc, Commissioner of Agriculture. We are greatly surprised and mortified to see some of our leading agricultural journals joining in this attempt to render the Commissioner unpopular among the masses and obstructing, so far as they can, the endeavors of this worthy officer to disseminate correct agricultural knowledge.

* * * * *

"If Gen. LeDuc cannot make tea growing profitable in this country, he has demonstrated the fact it can be grown as a farm diversity, saving thereby many a dollar to the consumer and the country. If he does not succeed in getting as much saccharine matter from corn stalks as we express from cane, he has proved that the country can supply itself from this source alone, in case the usual channels of supply are closed. If he has been humbugged with Minnesota Amber Sugar Cane, can we not forgive him in view of the fact that he has introduced a plant that can be converted into sugar from June to December, quantity and quality being little, if any inferior to the best ribbon cane?

* * * *

"He does not content himself with the *honors* of his position—he strips himself to *the work* before him. Such a man will make his mark in the world. He will push his investigations in the interests of agricultural knowledge in every direction. We confidently predict that his administration of the Bureau of Agriculture will be successful, that our law-makers will be obliged to listen to the demands of the farming classes and make the Commissioner a Cabinet officer."

We ourselves admire the vim displayed by the General in pushing inquiries into those subjects which, if resulting in practical success, will redound to his fame and add millions to the wealth of our people. If half the tea can be grown here that our people now import, and if from corn-stalks (heretofore worthless even for manure) sugar can be cheaply made in every farmer's family, and if beets, cane, sorghum and corn can be made into sugar, enough to supply at low prices our home markets, then, our nation would be less dependent on other countries for these necessaries, our people would retain at home millions of treasure that go out to foreign lands, and

employment would be given to tens of thousands who are now suffering from want of work. In connection with this, we give elsewhere a practical and sensible letter from the Rev. Mr. Meech, of Vineland, N. J., showing what can be made of *corn-stalks*, by any farmer who chooses to do the like, with no extra expense for machinery, &c., beyond ordinary farm implements and a little labor that women and boys can do. This communication of Mr. M. shows that Gen'l LeDuc's efforts in this direction have excited the attention of farmers and we would not be surprised if before long, sugar making from corn-stalks became a common industry in the whole country. That the juice in the corn-stalk was rich in saccharine matter, has long been known, but it has been reserved for Gen'l Le-Duc to practically test the fact and induce our people to make an effort to utilize the idea for their comfort and welfare.

NOTICE TO SUBSCRIBERS.

This number closes the volume for 1878, and all Subscribers in arrears who do not settle up before the 15th of December will have bills sent to them, and we confidently expect in response a prompt remittance, so that we may be able to sustain ourselves under the newly reduced price of the Journal, and be gratified in giving our old friends the benefit of this great reduction.

"THE FRUIT RECORDER" has sent us marked copies of their journal, with the article of our correspondent, R. H. Haines, in the MARYLAND FARMER for November, cut from a copy of our paper, thereby clearly indicating that they mean *us* when they say,—"It shows that an editor that will publish such STUFF is either ignorant or careless." We were not aware that the editors of the *Fruit Recorder* had been appointed or were *per se* censors of the American Press. For ourselves, we acknowledge no right on the part of even the most *distinguished* of the editorial fraternity to censure us as either "ignorant" or "careless." We stand on our rights and our own merits, and happily are so well able to take care of our own interests as to be "careless" of any impertinent dictation as to the course we are to pursue in the management of our popular and long established magazine.

The first weeping willow in England is said to have been planted by Alexander Pope. He received a present of figs from Turkey, and, observing a twig in the basket ready to bud, planted it. From this stock all the millions in England and America is believed to hove sprung.

The State Fair of Virginia.

This Fair was held in Richmond on the 29th of October and continued four days. We had the pleasure to be present, and must say, among the great many fairs all over the country we have attended during many years past, we never enjoyed one, in every way, more than we did this one held at the capital of old Virginia. We met a great many old friends, whom we had not seen for a long lapse of time—we formed new acquaintances and ripened formerly slight acquaintances into friendship in many cases—we were the recipient of favors and courtesies that seem natural to the sons of the old dominion. Among these we can not refrain from acknowledging the obligation we are under, to the genial kindness, at all times during our stay, of Dr. L. R. Dickinson, Editor and Proprietor of the ably conducted and popular "SOUTHERN PLANTER AND FARMER."

The preparations were very extensive, yet there seemed a lack of room for the great amount of choice stock, poultry and farm products of every character. The display of machinery was very large and represented many of the best and newest inventions of the day. The floral and domestic halls were of the most attractive character, reflecting high credit upon the florists and amateur horticulturists, and proved that the daughters of Virginia were not a whit behind their sisters in other states, in all the taste and skillful industry required in well managed households.

The crowds that were in daily attendance showed that the people of the South felt a deep interest in agriculture and its kindred pursuits. The receipts of the Association were large and very encouraging to the managers. The Society united all the solid features that characterized the palmy days of our earlier associations of like character, with the usual amusements, parades, shows and clap-traps that have particularly distinguished modern management of agricultural fairs.

The great characters of this Society, which caused us to remember vividly the scenes of years past, when the State Society of Maryland held evening meetings, was the large attendance at the rooms of the association, when spirited discussions took place upon the subjects connected with the interests of the Society and of agriculture; when pleasant reunions of farmers and free interchange of opinions took place. There was lively interest manifested in the work they felt to be closely bound up in their welfare. These evening meetings we enjoyed as we used to do in our old Maryland Society meetings. There was a "feast of reason," an intellectual banquet after the days review of

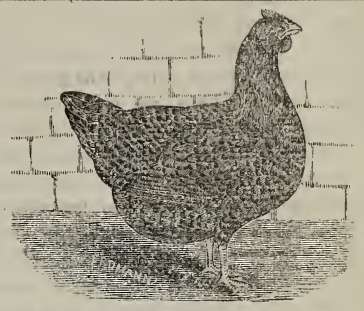
the objects on the grounds. Success must ever attend societies conducted like this Virginia and the Northern State Societies. We really felt chagrined when we remembered that for the last four or five years, not enough members of our State Society in Maryland could be gathered together in any one evening of its annual meeting, to constitute a quorum for election of officers. Here in Richmond, large numbers of the best and most intellectual land owners of the State, nightly assemble to confer together as to what was best to be done for the progress of agriculture, and what measures, social, political and practical, should be adopted to advance the interests of the farming community. We bid this noble association of Virginia farmers, God speed, and feel sure if they will harmoniously go on as they have begun, they accomplish immense good for the elevation of their occupation and the increase of the wealth and power of their State morally, physically and politically.

E. W.

LARGE MANGELS.—Mr. F. B. Steiner, formerly of Baltimore, who owns a well-managed farm on Rhode River, Anne Arundel Co., Md., left at our office a number of splendid specimens of his mangels grown this year They were from 2 to 2 feet 10 inches long, and one weighed 14 pounds. He raised 1,474 bushels on 1 and 1-3 acres of land. He states the cost of growing was a small fraction under 4 cents per bushel. Mr. Steiner says he believes if capitalists would start a beet-sugar establishment, that the farmers in his section would furnish all the beets required, as he is confident it would be the most paying crop that can be grown.

Mr. Steiner is a go-a-head farmer, and this year cut off 25 acres of corn with the corn mower, one man and two horses employed only two days. His corn is drilled 36 to 40 inches between the drills, and he has no trouble in cutting two rows at a time with the mower. He practises level cultivation, and sets the mower about 4 to 6 inches above the grouud. It cuts the green stalks with all the seeming ease that grass is cut. This process is a great saving of human labor, and much more rapid. Broadcast corn he mows in the same way, and finds it wilts faster cut with the Mower than when cut with the Reaper or by hand, as by either of the latter methods it is left in bunches whereas the Mower leaves it scattered like grass,

The Poultry House.



For the Maryland Farmer.

PLYMOUTH ROCKS.

Nothing could show more plainly that farmers are anxious to improve their poultry stock for market purposes, than the great demand for Plymouth Rocks. This demand is not *speculation* from *fanciers* at high prices, but is directly from fanciers at moderate prices, to be sure, but in such quantities that it pays the fancier to raise them. Only this day a farmer came in a store and bought three Plymouth Rock Cockerels, remarking that what he wanted was early hatched birds of good size, good form and low well set legs, of a bright yellow color. He told us that for several years he has been using only Plymouth Rock Roosters on common or cross bred hens, and that the first cross makes excellent early matured chicks, of large size, choice quality and fine appearance for market. He says he has a number of choice half-bred cockerels as large as the pure breeds, for which he finds ready sale to his neighbors at $1 each, but he would not use them for his own breeding, preferring each year to buy thorough-bred cocks of fresh blood. This man's "head is level," as the great value of thorough-bred males of fowls as well as of swine, is in the *first* cross in *common* or native stock. The expense in buying new males each year is very moderate compared with the advantages.

Plymouth Rocks seem to answer that often asked question, *which is the best breed of fowls?* They combine more good qualities than have yet been concentrated in any other one breed. They are not so large as the Brahmas and Cochins, but are much earlier matured, feather more quickly and will even out weigh them when young. Cocks weigh from 8½ to 9½ pounds, and hens from 6½ and 7½ pounds on an average, and are surely large enough for practical purposes. They have the great advantage over Asiatics of being clean legged and having greater perfection of form. They are not quite such extreme layers as the Leghorns,

Hamburgs or Polish, but then these varieties are non-sitters of very small size—two disadvantages to the average farmer.

We can safely say that the Plymouth Rocks lay more eggs in a year than any other beed that hatches and rears its own young—the games alone possibly excepted. They aie good sitters, but easily broken up and after raising a brood of chicks they are remarkable for beginning to lay again earlier than any other fowls. I have known a Plymouth Rock hen to begin to lay when her chicks were only one week old, to continue to lay over sixty eggs before desiring to sit again. The above illustration was drawn from life of a young pullet raised by the writer the past season, and while it does not show the full development of an old hen yet. H Erdenmann, the well known artist, pronounced it the most perfect pullet he had ever drawn. It is to be hoped that the day is not far distant when the Plymouth Rocks will become the common fowl of our country—being bred on every farm, either pure or crossed for market, and at the same time being continually perfected or improved by *fanciers* to whom farmers must look for their fresh crosses. One lingering fault to be thoroughly exterminated is the tendency to black or colored scales on the front of the legs of pullets, which now only disappears with age.

Phila. Pa. W. ATLEE BURPEE.

For the Maryland Farmer.

MESSRS. EDITORS:

I beg to hand you a list of some poultry and pet stock shows soon to occur, which I take from the *Poultry World*, H. H. Stoddard, proprietor, Harford, Conn. I beg leave to call special attention to the card of the Virginia Poultry Association, and hope that the show may have a lively influence over the poultry interest of the Old Dominion; for no State has superior advantages to Virginia for poultry raising, with her mild winters, many streams of clear water in which the ducks and geese may float and the young green goose dive at the reflection of his lady-love, and, as many other geese of the present day, get their bills a little muddied by pressing too closely on a shadowed illusion. The old State also has its green hills and long ranges of fresh meadow, in which can be heard the sound of the wild turkey's voice and the drumming of the pheasant on many a fallen tree or dead limb, which sounds seem to be a voice from the wilderness crying "Prepare and make us comfortable houses, and not lousy sepulchres for our bones, and we will come and dwell with you and make you happy with the beauty of our plumage and our happy ways. We will scratch up the old woman's flower garden, sometimes, and to keep peace in the family occasionally will take a turn around the old man's prize wheat and potato patches, and at Christmas and Thanksgiving Day—what then?—Over eighteen hundred years ago it was declared that no pleasnre was taken in the blood and flesh of bulls and goats, and the great American people in the advanced civilization of the nineteenth century can't give thanks to God without a poor old turkey or goose,—and, if not these, for the poor, an old duck, hen, or possibly a noble old rooster whose voice has hailed for many a day the coming of the morn. I do not mean to condemn the use of fowls for food, but I think if the President would issue a proclamatton that no fowls to be eaten on Thanksgiving Day, it would be more Christian-like. Is it giving thanks to God for a man to eat twice as much turkey as his stomach can digest? Is it giving thanks?—that pestilential stench of rotten poultry, which rises from the market houses the week following Thanksgiving Day, proving that too many innocent little lives had been destroyed, and that they had been killed only to prove a nuisance. Your cruelty to animals Association might well turn a little of their attention to cruelty to fowls, which exists in too many and horrible shapes to mention here.

In publishing the following notices of shows it may be well to advise exhibitors to ship fowls always in coops lined by tacking cotton cloth around the inside; this guards against having the plumage broken or ruffled by wooden slats; it also prevents the fowls from getting their heads, feet or long feathers through the slats, which invariably disfigures or injures them. Nail a deep water can to the side of the coop, as high as the fowl can reach to drink. Put clean, dry straw on the bottom of the coop, Feed with wheat or cracked corn, and never with meal or any soft food which can soil the plumage, In mating for the show pen, take the *Standard* and examine every point; and mate for the show pen and not for breeding — remembering that birds must correspond as nearly as possble to standard for the show pen, and must be mated as nearly as possible resembling each other in marking, whilst the opposite is often desirable in same breeds in mating for color in breeding pens.

The Virginia Poultry Association has been very fortunate in securing Mr. James M. Lambing, of Parker's Landing, Penn., as judge for their coming show, as he is a breeder of established reputation, and whose judgment on many varieties of fowls

is unquestioned. Mr. Lambing is noted as a breeder of Black, Silver Spangled and Golden Penciled Hamburgs, Light Brahmas, Partridge Cochins, Plymouth Rocks, White Leghorns, India Silkies, B, B. K. Game Bantams, Imperial Pekin and Rouen Ducks.

W. S. TEMPLE,
47 S. Howard Street.

Poultry Shows to Occur.

VIRGINIA POULTRY ASSOCIATION.

The second annual exhibition of the Virginia Poultry Association, will be held in the city of Richmond, Va., January 15, 16 and 17, 1878.

We have secured the services of Mr. James M. Lambing, of Parker's Landing. Penn., to act as Judge on that occasion. We cordially invite fanciers from all the States to come with or send their fowls to the exhibition.

Premium lists now ready.

A. M. BOWMAN, President.
H. THEODORE ELLISON, Secretary,

Western Reserve Poultry, Pigeon, and Pet Stock Ass'n, Mantua Station, O. Wm. Courtney, Sec'y. Dec. 10–12, 1878.

Southern Conn. Poultry Ass'n, New Haven. F. A. Chase, Sec'y. Dec. 10–13, 1878.

Oneida (Ill.) Poultry Ass'n, Oneida, Ill. L. T. Tate, Sec'y. Dec. 11–12, 1878.

R. I. Poultry and Columbarian Society, Providence. Jas. L. Bullock, Sec'y. Dec. 12–18, 1878.

Wabash Valley Poultry Asn'n, Lafayette, Ind. R. Twells, Sec'y, Dec. 16–20, 1878.

Chenango and Madison Union Poultry Association. Sherburne, N. Y. G. W. Little, Sec'y. Dec. 17–19, 1878

Vermont State Poultry Association, Montpelier. Fred. A. Field, Sec'y. Dec. 17–19, 1878.

Berkshire County Poultry Ass'n, Pittsfield, Mass. Wm. K. Rice, Sec'y. Dec. 17–20, 1878.

Parker City Poultry Ass'n, Parker's Landing, Penn. James M. Lambing, Sec'y. Dec. 20–25, 1878.

Germantown, Phila. (Penn.) Poultry and Pet Stock Ass'n. Jas. Lisk, Sec'y. Dec. 24–26, 1878.

La Grange Poultry Association, La Grange, Ind. F. D. Rnick, Sec'y. Dec. 24–28, 1878.

Southern Mass, Poultry Association, New Bedford. Edmund Rodmau, See'y. Dec. 24–31, 1878.

Plymouth (Penn.) Poultry and Pet Stock Ass'n, Plymouth. J. W. Vandlenig, Sec'y. Dec. 25–27, 1878.

Easton Poultry Association, Easton, Penn. J. L. Otto, Sec'y. Dec. 31, '78—Jan. 3, '79.

Kane Co. (Ill.) Poultry Association, Aurora, Ill. R. W. Gates, Sec'y. Dec. 31, '78—Jan. 3, '79.

Connecticut State Poultry Association, Hartford. I. Altman, Sec'y. Dec. 31, 78, to Jan 7, '79.

THE APIARY.

BEES FOR FARMERS.

There is no good reason why every farmer should not make his land literally flow with milk and honey. From the cows that graze upon the hillsides comes a rich abundance of milk, and if only a few colonies of bees are cherished, there will also be an abundance of honey.

It is with bees as with many other directions of farm industry, a reading of the principles of bee culture as given in the books, as coming from professionals, are so elaborate as to deter the average farmer from entering upon this line of business. But this need not be so, for while extra care will produce correspondingly good results, even satisfactory results may be attained with comparatively no expenditure of labor.

At the start, all that is necessary is two or three good strong colonies of bees. These may even be housed or hived in a common square box, with a safe covering and a shelf at the bottom upon which the bees can alight for entering the hive.

Where box honey is desired, a hive similar to the above but with an upper apartment with two holes through the partition to allow the passage of the bees into small boxes having corresponding holes; the boxes have a glass in the front, that the filling of the boxes may be discovered by opening the door to the upper apartment. When the boxes are filled, they are removed by slipping a tin slide between the box and the hive, shutting up the passage between the two, and pulling the box or boxes out.

The hives may be set upon a wide board or set in a frame and supported by means of strips attached to opposite sides. So long as the colonies are strong, for ordinary family use, three or four colonies are sufficient as a stock trade. If one is to set out in this branch of industry, they must be certain that there is sufficient bee pasturage, or else the effort will prove a failure, for bees will no more thrive and prove any wise remunerative, without feed, than will a field of corn or potatoes without fertilizers. Assuming that the pasturage is ample, that the farmer has a few colonies well established, and it remains to describe the after service required. Ordinarily bees will require no care in the winter, except if somewhat warm it is some times deemed advisable to remove them to a darkened and as cool a room as possible.

In the late spring or early summer they will usually swarm, and sometimes twice in a season, and will usually alight upon the twig of a tree

or a small branch and if provided with a hive, will generally accommodate themselves to it with no trouble.

To hive them have a table spread with a clean cloth under or near the place where the bees alight with two sticks for the hive to rest upon, and then cut off carefully the branch with the bees upon it, placing it upon the table with the hive turned over them. If one is at all afraid of bees they had better protect themselves with netting before undertaking to handle them, although when bees swarm they usually gorge themselves with honey from the parent hive, as a stock in trade to commence business with, and are less troublesome than at other times. We seldom protect ourselves in hiving bees and have sometimes dropped accidentally a swarm, being covered with bees and escaping without a sting.

Ordinarily a colony will fill the hive with comb and honey by the close of the season, and then the honey in the kind of hives described is only obtained by "taking up" the colony, that is, by destroying them. This is accomplished by digging a little hole in the ground about the size of the hive, heating a stone red hot and placing upon it a little quantity of powdered brimstone, placing the hive with the bottom removed over the same, closing up around it with the dirt removed from the hole; this smothers the bees and then the honey can be removed without danger.

If there is a desire to pursue a more approved course, some of the patent, non-swarming, movable comb frame hives must be used, but these involve much more attention.

Honey is one of the sweets that every family may be possessed of if they are willing to do just a little service in a rude way. The plan above requires only the expenditure of a few dollars for the original colonies, for the hives can be made of ordinary pine boards, planed smoothly and nailed together as every ordinary farmer ought to be able to do.

There is always a satisfaction in the knowledge that anything that comes in the line of luxury has has been produced by ones self and this is no less true in the case of honey; and yet it may be said that comparatively few farmers are in the full enjoyment of it as coming by their own industry, partly for the reason that they imagine that there is some "royal road" to its success.

It is hoped that what is above written will dispel any such thoughts and that many families now destitute of this desirable article will be made happy in its possession.

Columbia, Conn. WILLIAM H. YEOMANS.

CORN, CORN SUGAR, &c.

EDITORS MARYLAND FARMER:—Your inquiry for a solution of the mystery of having two-ears grow on a corn-stalk, with a different number of rows on each ear, reminds me of my experience with sugar cane being the same as that of the cultivator of the Compton corn. I account for it by the combination of the two sorts in the parent stalks of the preceding year; the one giving pollen may have been eight rowed, and the one receiving it twelve-rowed—the seed, retaining both characteristics, has reproduced them in given instances. We have analagous experiences in the animal kingdom.

CORN SUGAR.

I am glad to see that so much attention is being directed to the manufacture of sugar from corn-stalks. A very fine sample was shown in the exhibits at the Centennial Exposition, at Philadelphia. I have lately seen an item, in a Boston paper, saying that a Pennsylvanian has been able to make it for three cents a pound.

CORN VINEGAR.

For three years I have seen a sign, in large letters, on a house in Philadelphia—"Corn Vinegar." I suppose from its location and surroundings, the grain is the part of the corn here used. I now have a keg of juice of the stalks of sugar-corn, on which I am experimenting to make vinegar. It bids fair to be a success, by being carried through the same process as that which makes good cider vinegar.

CORN MOLASSES.

Shortly after I gathered my sugar-corn for canning, I cut off the top of the stalks and stripped the leaves from the butts. As the machinery of the sorghum mill was not available' I run them through an ordinary feed cutter, and then ground and pressed them like apples, and boiled down the juice as every housekeeper boils down cider. The yield of juice was at the rate of 14 gallons from 5 rows, each 7 rods long. I boiled it down 7 parts to 1, which made it thick, rich syrup. I exhibited a sample at our fair, which attracted much attention and was pronounced by a number of good judges to be superior to molasses from sorghum. One of my friends was so well pleased with it, he took a larger quantity than I had to the sorghum mill when it was in operation, and got from it a syrup superior to mine. He intends to raise more sugar-corn next year than this, and make a larger quantity of the molasses I raise the mammoth variety, and find it sweeter as well as larger. Many ears weigh over a pound after being husked, and many of the stalks from the ear down weighed over a pound each.

Yours truly, W. W. MEECH.

Vineland, N. J., Nov. 5th, 1878.

THE DAIRY.

Milk comes through Inheritance.

A cow eats food and milk is made, says Dr. Sturtevant, in quantities according as the ancestry of the cow have been good or poor milkers. The "natural'. or wild cow gives hardly enough milk for her calf, and not enough to satisfy a domestic calf. Feed the wild cow high and her milk yield is slight. Large quantity of milk comes largely through inheritance. It is the same with quality. The milk of different breeds has a different character. When a cow of any breed has enough food — considered in the elements of which the food is made up — if there is nothing lacking in the food that is needful to her growth and health, then I think it is agreed by the best authority that a mere increase of food will not change the quality of the milk, while it will increase the quantity.

The Cow for the Family.

Dairymen and farmers should be well informed as to the best kind of cow for their special use, yet what a variety of opinion exists in regard to which kind is the best? For family use, where one cow is kept to supply milk, cream, and butter, it is a great object to get an animal that is easily kept, that is gentle, a good milker, and yields much cream and butter. Of all the varieties of cows, the cross of the pure Ayrshire and the Jersey is the one to be desired for the use of the family or for the butter dairy. A cow that can be fed on the mowing of a half acre lawn, with a quart or two of meal daily,—that can be made a pet of, and that will give a pound of golden butter every twenty-four hours, with cream for the table, and milk for all purposes and to spare,—is, without doubt, the best possible and the cheapest cow for a family, and for the butter dairy as well.—*Country Gentleman.*

Cutting Straw.

Straw contains the phosphates in large proportion, and animals need phosphates to provide materials for the formation of bones. But milch cows, particularly, need phosphates, as these are always present in milk ; every ten gallons of milk containing half a pound of phosphates or bone-earth. Thus, a cow giving twenty quarts of milk a day needs to draw from its food two pounds of bone earth every week. Straw also serves the useful purpose of distending the stomach, and thus promotes its healthy action. There is great saving in the cutting of straw. The animals do not waste it by dragging it out of their manger and trampling it under their feet. Time and labor are also saved the animal in masticating its food. The cow obtains her supply of food readily, and then lies down to chew her cud and digest the food.—*Ciucinnati Weekly Enquirer.*

The farmers in this section are realizing the importance of dairying. The first year we could only get 120 cows; the second, 190 ; the third, 175 ; and this year we have 600, with a fair prospect of increasing to 1,000 next season.—*Western Farm and Live Stock Journal.*

The Jersey and the Common Cow.

Much has been said in regard to the Jersey cow, as being too small for beef after becoming too old for milk. Now let us look at the figures in that matter and see what the real facts are in this case. The majority of farmers, in looking at a Jersey cow, will say—too small for all purposes for us farmers ; we want something that will make oxen, and beef, and when a cow is too old to milk we want something that will make good beef, and a lot of it ; we want none of your "deer" meat. I think this is a mistaken idea that farmers have fallen into without looking into the question at all Now for the figures. An average Je rsey cow will in one year, make 250 pounds of nice yellow butter, worth now in the market twenty-five cents a pound, amounting in one year to $62.50, and raise a calf on the skim milk, worth, with us, $14, making the sum of 77.50, without making any charge for the skim milk, after the calf is weaned. Now let us take the average native or common cow and see what she will do. From the best authority I can find, together with my own experience, she will in one year make 150 pounds of butter, worth now in our markets twenty-two cents a pound, amounting to the sum of $33, and a calf fed on skim milk, worth $5, making in all $38. Now, take $38 from 77.50, the amount of the product of the Jersey, and you have $44.50 in favor of the little Jersey cow. Now multiply $44 50 by 10. the number of years we usually milk a cow before turning her into beef, and you have the nice little sum of $445 in favor of the latter, when you get ready to make beefout of her. Now it does not make much difference about the price of beef in so small amount as there would be between the large cow and the small one compared with the large difference in the amount of butter, and, in addition to the above,

some credit must be given to the Jersey for a less amount of food consumed, which is about 2½ per cent of the live weight on the difference of the of the two cows.

In looking the matter over, I cannot but come to the conclusion that, for dairying purposes, the Jersey cow is the cow for the farmers. There is a great amount of labor in the manufacturing of butter, both in-doors and out, and a cow that will make only 150 pounds of butter a year is not worth keeping for butter at twenty-five cents a pound, and hay at twelve dollars a ton will not more than pay her keeping, so that there is a total loss of the labor employed; whereas a cow that will make 250 pounds a year will afford a good profit over the keep of the cow.—*H. E. Abbott, in N. E. Farmer.*

BLOODY MILK,—I would advise your correspondent having a cow giving bloody milk to give her a half pint of *wood* ashes, at night, in oats or bran. I think three or four doses will cure her, if the case is not of too long standing. I have never known the ashes to do any harm.

Smyrna, Me., Oct. 25, 1878. R. E. T.

TESTING MILK.—It is stated, in a German paper, that the purity of milk may be tested by the following very simple method: A well-polished knitting needle is dipped into a deep vessel of milk, and immediately withdrawn in an upright position; when, if the sample be pure, some of the fluid will be found to adhere to it, while such is not the case if water has been added to the milk, even in the smallest proportions.

THE PORK TRADE.

The immense number of hogs raised this year will have the effect of reducing very much the price of pork and bacon. The pork packers of Cincinnati and Chicago admit that the ruling prices will be very low for the coming year, unless some extraordinary demaud in Europe is caused by political complications that lead to war, but which is unlikely. Summer packing is on the increase and this is one cause why pork will lower in price, as more young hogs of smaller weights are being slaughtered and can be put on the market at less cost to the breeders of these animals. The summer packing, which is becoming very popular, is upsetting the winter pork trade. Two million of hogs were packed in Chicago during the past "summer season," from March to November, instead of *none* a few years ago. Mr. Rawson an extensive pork packer of Cincinnati says, "there probably will be a great deal of summer packing next year in Cincinnati."

No matter what may be the foreign demand, pork must fall in price, and to that extent the mass of consumers will be benefited, while it should stimulate our farmers to raise their own pork and some for sale, as it shows conclusively with improved breeds and high feeding pork can be raised profitably at much lower rates than have prevailed for years past. When a nation has a plenty of meat and bread, it must be prosperous—these two essentials of life-support being high and scarce must bring distress upon the people. No man can afford to labor for low wages when his meat and bread is at extravagant rates. Pork at $3 per 100 pounds, corn at 50 cents per bushel and wheat at $1, men can afford to work well at $1 per day. It was thus in the palmy days of the Republic, but when wages were $3 per day and flour at $10 per barrel with pork at 12 cents and beef 25 cents per pound, then came on us the dismal days of no employment for labor, general mistrust, discontent and the plea for modern communism.

SPECIAL PREMIUM!

Messrs. W. ATLEE BURPEE & CO., of Philadelphia, have generously donated for premium to getters up of club subscriptions to MARYLAND FARMER for 1879, *one choice Boar Pig*, three months old, of their best bred families of that breed of hogs. We offer this splendid pig to the party who before the 10th of January, 1879, will send us the largest number, over 15, of subscribers, with *one dollar* cash for each name. It will be boxed, with feed and delivered on board boat or rail road, free, directed to the fortunate winner of the prize.

We refer our readers to the advertisement of Mr. A. E. Warner, 135 W. Baltimore Street, Baltimore. For over half a century this excellent silver and jewelry establishment has maintained the highest character for excellence and taste in workmanship and fidelity in its general dealings. It is no disparagement to others in like business to say this is one of, if not the oldest and largest houses engaged in their line, in the city of Baltimore. This house is remarkable for its skill in getting up holiday, marriage and complimentary presentations.

JOURNALISTIC.

THE SUNDAY AFTERNOON, one of our best magazines, published monthly at Springfield, Mass., makes a special offer, to send the magazine to each one who subscribes before January 1st 1879 at $2.10, postage paid; the regular price being $3 a year.

SAVANNAH WEEKLY NEWS.—In that popular paper of November 23d, will be commenced a new serial story of absorbing interest, entitled "Afterward," from the gifted pen of Mrs. Ophelia Nisbet Reid, whose charming stories. "My Mother's Daughter" and "Mrs. Dare," have added such literary interest to this deservedly popular journal.

The NEWS also commences the publication of a series of articles on "Orange Culture," written expressly for its pages by Mr. C. Codrington, of Florida. These articles, which have been prepared after much practical experience and careful consultation of the best authorities, will be of special interest to those engaged in the culture of the orange.

Its charming stories by Southern authors, the able contributions of its numerous correspondents, together with its agricultural department, its careful compilation of the news of the day, foreign and domestic, its reliable market reports, editorial comments, and choice miscellaneous readings, makes the WEEKLY NEWS one of the most instructive, entertaining and valuable newspapers in the South.

INTERNATIONAL REVIEW for November-December, has besides the grave, elaborate articles of a Review an admirable story of Wilkie Collins, entitled "The shocking Story," and in order to include it, the publishers have enlarged the number by adding 48 extra pages. Price $6.50 per annum for this monthly volume.

DOMESTIC RECIPES.

In making pickle for beef and pork, or other meats, it is far better to use less saltpetre than is usually done. Saltpetre is a strong poison, though in small doses is cooling to the system overheated by strong drinks. Sulphate of potash should be substituted in a large degree. To every gallon of water 1 ounce of sulphate of potash and ½ ounce saltpetre is recommended by some. In its place, we use 1 pint of weak lye, made by boiling wood ashes, to each gallon of water, ½ lb. of sugar, ½ oz. of saltpetre, 1 lb. of salt; boil well, skim, and when cold strain and pour over the meat close-packed in the barrel.

POTATO SOUP.—Take six large, mealy potatoes, sliced and soaked an hour. Add one onion sliced and tie in a rag, a quart of milk, and a quarter of a pound of salt pork cut in slices. Boil them three-quarters of an hour and then add a table spoonful of melted butter and a well-beaten egg; mix in a cup of milk. The pork can be omitted, and use salt and pepper to flavor.

RICE PUDDING.—Take one quart milk, half cup rice (boiled), four table-spoonfuls sugar, four eggs; flavor. Put milk and sugar in saucepan and let it come to a boil; then stir in the rice which has been mixed with the beaten yolks; let this boil two or three minutes; beat the whites to a froth; mix with them two table-spoonfuls sugar; place on top the rice and place in the oven to brown.

FRENCH TOAST,—This is a very nice breakfast dish. Take a couple of eggs, beat them, and pour with them a little milk, season with pepper and salt. Cut your bread as if for toast, pour the egg over it, and put it in a pan of hot butter and fry brown.

CHEAP SALAD DRESSING for lettuce or cabbage. One egg well stirred with one teaspoonful of mixed mustard, and one of salt, two-thirds of a cup of vinegar, one cup of fresh cream, one tablespoonful of butter. Heat slowly, stirring constantly, till it comes to a boil. Make it in the morning, that it may become perfectly cold when put on the lettuce.

HAM TOAST.—Scrape or pound cold ham, mix it with beaten egg, season with pepper, lay on buttered toast, and place in a hot oven three or four minutes. Dried salmon, smoked tongue, potted meats, or any nice relish, are also good on toast, prepared like the ham.

LADIES DEPARTMENT.

Chats with the Ladies for December.

BY PATUXENT PLANTER.

"Aquarius rules the frozen skies,
Deep-frowning clouds on clouds arise,
Fraught with the thunder's roar;
With fury heaves the raging main,
When foaming billows lash in vain
The hoarse-resounding shore."

When the Romans divided the year into ten months, this was called Decem-ber, or 10th month. The ancient Saxons called it Winter month, and after their conversion to Christianity they termed it Holy month, from the anniversary of the birth of Christ which occurs in it.

During my stay at the North, last summer, I was kindly taken by that warm-hearted entertainer of Southern people, Mr. Baker,—of whom and whose wonderful place I shall give an account hereafter,—to the splendid country seat of Mr. Hunnewell, near Wellesley Station, some 18 miles from Boston. This is a fine estate, of large size,—dairying the chief business, Nearly all the articles used for milk and butter are of heavy, clear glass. and the proprietor considers it as about as cheap as tin or crockery ware. Being glass, it is handled with more care and the cost in breakage is really less than when lower priced and harder to clean utensils are used, besides the proportion of cream to milk is more readily observed, as also any impurities in the milk. An excellent idea, in my opinion. About fifty acres around the handsome residence is devoted to the ornamental grounds, bordering on a beautiful lake or extensive pond for sailing and piscatory amusements. To these fifty acres is given the most elaborate finish. In a bend dropping from high-ground to the lake is an Italian garden, kept in perfect order, forming an amphitheatre with the bright waters of the lake for the proscenium, with terraces and broad marble steps at proper intervals ascending from the water to the plateau of high grouud. In this garden of "terraces on terraces upthrown," are winding gravel walks, marble statues, flower beds, unique hedges, evergreens trimmed in every form, of birds and beast, utensils, such as spoons, forks and couches, &c., all in the most perfect order conceivable; hardly one spear of grass, in the dense turf, higher than the other. On reaching the level ground, we behold a scene of wondrous beauty; no straight lines, but curved lines of walks and often abrupt turns that startle one by the sudden burst of beauty unfolded. At one moment you are in an entangled forest as if in its primeval state; then a wilderness of acacias, laurel, rhododendrons and other superb shrubbery; anon in the midst of a bewildering scene of rare, hardy and conservatory flowers. It is a scene of enchantment, and one realizes what he dreams of occasionally as Arcadia. We left this lovely spot with regret, and revert to it often in memory with pleasure.

Mr. H. deserves great credit for expending his vast income in this way, instead of placing the whole amount in a huge pile of stone brick and mortar, that once erected no longer gives employment to honest industry, but remains a lasting monument of the folly of man's contemptible pride, which some day in a country like ours will make an heir of a great castle poorer than the scullion in his kitchen He has an elegant, commodious dwelling, and grounds about it like a Garden of Eden, giving support to hundreds who otherwise might be in want. A cotemporary writer speaks of these grounds, and makes a proper distinction between palaces and ornamental grounds, as to their respective values to the suffering, intelligent laborers of the country. Mr. Hunnewell employs fifty laborers to keep in order the fifty acres of his place devoted exclusively to elaborate ornamentation.

The writer alluded to says.—"Although this expenditure of Mr. Hunnewell may seem large in this country, yet it has doubtless accomplished a vast amount of benefit to the community, by furnishing an example of beautiful landscape gardening, that not only stimulates others in planting on a smaller scale. but shows them how it should be done to produce the most pleasing effect. A hundred thousand dollars laid out in building a house is not an unknown expenditure in this country, but half that sum well devoted to landscape gardening would do incomparably more good."

It is to be hoped that other men of wealth in our country will follow the example of Mr. H., and make our country blossom as a rose-garden, giving employment to thousands and daily being the source of blessings on the heads of such patriots and men of intellectual taste, instead of building great castles which will not benefit but do a wrong to their descendants and be no advantage to their fellow-beings, while a lasting proof of the vanity of a narrow mind.

GOOD FAMILY APPLE SAUCE.—Two quarts of water, a pint of molasses, a root of ginger, and boil all together twenty minutes; put in while boiling a peck of pared, cored and quartered apples. Stew till tender.

We are happy to welcome, as a new contributor to our Ladies Department, "A," who is an accomplished lady of Baltimore and a frequent contributor to some of the popular weeklies of our city:

AUTUM'N.

Who can but love the Autumn?
With all its brilliant gems,
Crowning each noble forest tree
With noble diadems.

To me the Spring is lovely,
With every bursting bud,
And artless bird-voice minstrelsy,
And fragrant waving wood.

The Summer is a youthful queen,
Decked with a golden crown;—
Her seat a throne of emerald green,
Casting sweet blessings 'round.

The Winter, with his hoary head,
Looks like an aged sage,
Bearing upon his lofty brow
The marks of honest age.

Each season does its own
Peculiar good dispense,
But Autumn e'er appeals
To immaterial sense.

When called upon to yield
His last expiring breath,
He wraps him in his brightest robes,
To meet the conqueror — Death.

He bids us read his lore:
And moral comprehend,
To deck us with our choicest store,
To meet our coming end.

Take of affection's flowers,
Aud weave a chaplet fair
All interspersed with richest gems
Composed of virtues rare.

Go with a cheerfnl heart,
And bind it on thy brow,
To meet the form of Age, which comes
To sojourn with thee now.

This is the useful tale
Bright Autumn tells in love;
May we its language understand.
And it a blessing prove.

A PLEASANT LETTER.

BY R. D. O. SMITH, ESQ.—(CONCLUDED.)

Fredrickton is the capital of this province. It possesses about 7,000 inhabitants, and has a considerable trade in lumber and supplies for the lumber trade. Its principle street extends for a mile and a half, I should judge, along the bank of the river. Near one end are the government buildings —a most antiquated and quaint string of stone structures, hardly high enough for a grenadier to stand upright in. About midway is the court-house, which is a good brick structure, and the custom-house, which is of the antiquated style. At the far end, to the north, is the governor's residence —a large, roomy, stone-house, with a fine conservatory and good grounds. The city occupies a flat, extending half a mile, or more, back from the river, and its streets are laid off generally straight and at right angles to each other. I noticed a number of handsome churches,and presume the people behave themselves as well as can be expected.

If you will permit me, I will here introduce the Queen Hotel. It is said to be the best in Fredrickton, and I can testify that it is *very* good; more than all that, it is kept by a born Yankee, named Burnham, who turns out to be an old friend and school-mate of my wife, which adds quite a tinge of romance to my short visit at his place. Another thing I can promise you: if you go there and want to take a ride, he will send you out behind a horse which I don't believe you can equal in Baltimore county.

At eight o'clock on Thursday morning, I re-embarked for St. John. Before taking leave of this noble river, I must notice a practice here which I have not seen elsewhere, in making boat landings. My boat only touched the dock twice or three times on her course, yet she took and delivered passengers and freight a dozen or more times. When approaching a landing, a pretty vigorous use of the whiste would bring out a boat from the shore. The engine is stopped, and side-steps let down as the boat comes alongside. A man with a boat hook catches her prow, and in a few seconds passengers and baggage are transferred, the boat released, and we go on. If considerable freigh. is to be transferred, a scow is employed. On this trip down, in that way, we have taken on board and delivered dozens of passengers, and in one instance thirty bbls. of potatoes and a number of baskets full of other produce, to say nothing of several babies—an article which seems to abound here as elsewhere.

I am informed that the crops consist of hay, oats, rye, wheat and potatoes; corn does not find enough summer heat. The corn on the table is of a deep yellow color, but very fair in quality. I noticed excellent tomatoes and beets, turnips, cabbages, carrots, cucumbers and squashes, which can not be surpassed. The butter is not as good as that made in New England. Apples, for some reason, have not flourished until recently, but now do well—I saw them of good size and excellent appearance.

The rise of the tide at St. John is 22 feet or thereabout. At low water, the harbor bottom is exposed in many places, and it seems strange to one accustomed only to the comparatively tideless harbor further South, to see great ships left entirely out of water at the recession of the tide. In going up the St. John, I wondered at the absence of tide marks on the shore, and on my return I searched for the cause, and discovered it in a remarkable reef across the river, near its mouth. This reef is a dam for the river water; as the tide falls there is a cataract there, and for a mile below it formidable rapids, like a miniature Niagara. At high tide this cataract is covered and the rapids obliterated, so that boats can pass in safety; so that here we have phenomenon, perhaps, unmatched in the world, of a water fall, which, for a portion of each day *runs up hill.*

A fine suspension bridge spans the river just below the falls. In the primeval times, the river was shut in behind a ridge, which cuts transversely across the course of the river, joining the heights upon which the city stands with the heights back of Carlton. At that time the St. John river was a great lake with its level many feet higher than its present level, and probably having a cataract outlet at the point of its present outlet; gradually this outlet has been lower and lower, until at present there only remains a reef, over which the tide contends with the river current.

I walked through the St. John market twice. As I have remarked before, the vegetables displayed are unsurpassed in size and fine appearance, by any that I have seen elsewhere. I have very rarely seen them equalled by the selected lots displayed at our agricultural fairs. In view of the primitive and shiftless modes of agriculture, the quality of the vegetables displayed shows the capabilities of the soil under an enterprising government; and a little more of Yankee thrift among the people, I think the Valley of St. John would become a very garden.

Meats are from choice stock of good size and condition; but of fish I saw but a meager display. Time did not serve me for any examination of the mechanical industries; but a cursory examination failed to show evidence of important manufactures, except in the line of ship building. American goods and tools are everywhere displayed, and English goods appear to be correspondingly scarce. Those articles of Canadian make which I saw were very generally inferior imitations of American wares, and quite often as before imitated, made by using the parts of a Yankee machine for patterns from which to cast.

Fine ships are built at St. John, and I saw three new ones taking on board lumber, and being rigged at the same time. These ships presented good models and good taste in finish.

On the morning of September 7th, I bid adieu to this picturesque city, and turned my face westward. The road to Bangor passes through a country, rocky and desolate in appearance. Here and there we find a station in the woods, with, perhaps two or three small houses in the vicinity, and but little cultivated land, or any evidence of improvement. The original growth of timber has been all cut off, and along the line the succeeding growth has been pretty rigidly thinned. I notice the white birch is a prevalent growth. It makes most excellent fire wood, free from snapping sparks, which with other woods render open fires dangerous without wire fenders.

At Watt Junction we crossed the road leading from the lower St. Croix, Calais and St. Andrews to Houlton in our Arroostic country and to Woodstock, St. John River Valley, and on to the St. Lawrence—a field which *we* should have occupied.

At Vancevorough we cross the frontier, and once more find ourselves in the region of baked beans, and in the clutches of our treasury officials. They are courteous, however, in the discharge of a duty somewhat unpleasant, and the ordeal did not take away my appetite for the pretty fair dinner for which the train waited. As the general appearance of a crowd indicates the sort of people from which it is drawn and their character, so does the general appearance of an agricultural country index the character of the people and their institutions.

Let any one who cavils at our government and institutions, and pines for a strong and stable government instead, cross the border into Canada anywhere, and mark the change. You could hardly slice from the atlas patches anywhere, which, if placed side by side, would show a cleaner line of demarkation than is evident to the eye in crossing our frontier into Canada. On the other side, buildings inferior and ill kept; but little evidence of enterprise or thrift. On our side just the reverse.

In the waters of the St. Croix I will wash my pen and close my book.

With good wishes for your future success in voyaging, and that your bark may always sail over seas as pleasant as those we sailed together,and that your captain may always be as successful as Captain Kent in "keeping her aizy."

I am, truly yours,

R. D. O. SMITH.

Washington, 8th Oct., 1878.

PUBLICATIONS RECEIVED.

From the Smithsonian Institution, Annual Report of the Institution for the year 1877. We have glanced over it only and it appears to be a volume of much value and interest.

On the Valuation of Commercial Fertilizers.—An abridgment of a learned and very useful paper read before the State Agricultural Society of Georgia, at Athens, on 14th of August last, by Pendleton, the well known author of Pendleton's Scientific Agriculture.

Amateurs' Hand Book of Practical Information for the Workshop and the Laboratory, price 10 cents, New York Industrial Publication Co. This cheap little book is worth to any body more than its cost, and to every one engaged in the business it relates to, it is worth a hundred times its cost. It is reliable in its recipes about bronzing, silvering, staining wood, soldering, preparing skins, &c.

Anatomy, Propagation and Cultivation of the Oyster.—An interesting little pamphlet by Dr. King of Baltimore. We shall make extracts from it soon.

The Honey Bee.—A good concise treatise on Bee Culture, by Thos. G. Newman, Editor of American Bee Journal, price 40 cents.

The Address of William Parry, of Cinnaminson, N. J., delivered before the Saulsbury Farmers' Club of Buck's county Pa. It is a plain, useful practical paper which we shall extract from as soon as we can find room in our columns.

The American Bee Journal, published by T. G. Newman & Son, Chicago, monthly, at $2 per year. This journal ought to be taken by all bee-keepers ; it is neatly printed and replete in useful information about bees, bee-keeping and honey. It is full of information as to the habits of those busy extractors of sweets from flowers and herbs, whose products, with the yield from our cows, makes our land literally flow with "milk and honey."

History of the Maryland Agricultural and Mechanical Association.

CHAPTER VI.

At the October meeting fo 1850, Dr. Wharton of Washington county, offered the following resolutions accompanied with forcible and eloquent remarks. They were adopted :

Resolved, That the Maryland State Agricultural Society, whilst it regards its past progress with an honest pride, and looks forward hopefully to a complete realization of its most ambitious wishes, is compelled to acknowledge that the condition of its finances is such as to cripple its efforts towards extensive usefulness, and materially to retard its progress;

Resolved, That the advantages accruing to the city of Baltimore from the selection of the present site of our agricultural Fairs, are such as fully to justify the hopes we have hitherto entertained of receiving at her hands liberal and efficient aid—and that it is expedient and proper to make a last and earnest appeal to her citizens for such assistance as will enable us to make the present location permanent.

Resolved, That for the purpose of making this appeal properly and efficiently, a committee of be appointed, who shall in such manner and form as to them may seem most to command success, confer with the citizens of Baltimore, in each ward of the City, and make known to them in the fullest manner, our designs, our means, and condition, our reasonable expectations, and the ground upon which they are based.

Resolved, That the foregoing Preamble and Resolutions be published in the daily papers of the City of Baltimore.

This movement was followed by the strong appeal of President Calvert which was given in the last chapter. The President, in pursuance of authority vested in him, appointed thirty distinguished gentlemen a committee to carry into effect the above resolutions. The committee assembled at the Society rooms, on the 10th of December, 1850, and organized by calling Alexander Murdoch, Esq., to the chair and appointing James H. Luckett secretary. After interchange of views, Geo. W. Dobbin, Esq., submitted a preamble and resolutions, "proposing to raise the sum of 10,000 dollars, for the purchase of a lot of ground, and the and the erection of the necessary enclosures and building thereon, suitable for the purposes of the Society at its annual exhibitions—which were unanimously adopted."

"The chairman was authorized to appoint such committees in the several wards as might be deemed necessary to effectuate the object in view, and to call an adjourned meeting of the committee on the third Wednesday of January, and at the same time, to invite the attendance of the ward committees he may appoint."

The chair appointed sub-committees, one for each ward in the city, and soon more than the sum

named in the resolution of Mr. Dobbin was subscribed. The Committee appointed to purchase a place for holding the cattle-shows secured, in August, a well-located lot of 19 3-8 acres, at the head of North Charles Street, in a direct line from Washington Monument.

The officers went to work with a will, and had the grounds prepared for the Exhibition which took place on their new grounds, beginning on the 21st Oct.1851 and continued to the 24th, inclusive. This was one of the most interesting exhibitions the Society ever held. The great statesman, Daniel Webster, was the appointed orator, but at the last moment he failed to appear for good reasons assigned. The able Senator of Illinois, the Hon. S. A. Douglass, happened to be in Baltimore, and consented at a moments notice to supply the place of Mr. Webster. It is useless to add that his impromptu address was received with the highest admiration by the large and intelligent crowd which thronged about the stand.

At this meeting, the exhibition of stock of all kinds,—horses particularly—was large and choice; there was a great display of machinery, and indeed all the departments were full, which, altogether made up a grand show that attracted throngs of people to the exhibition.

Messrs. C. B. Calvert, Clement Hill, John Glenn, Col. Carroll, J. J. Hewlett, A. Clement, S. T. Earle and Jas. N. Goldsborough took premiums for *Short Horns*, in the different classes.

For *Devons* the recipients of premiums were Messrs. Oden Bowie, Holcomb of Delaware, A. B. Davis, S. T. C. Brown, Lewis. Prof. Baer, H. Crowl, L. Bailey and H. G. S. Key.

Holsteins, Messrs. W. B. Dobbin, Zenos Barnum, G. V. Worthington, G. V. Lurman, C. C. Brown, C. B. Calvert and C. J. B. Mitchell received premiums. Mr. George Patterson exhibited a splendid herd of Devons, but not for competition for premiums.

For Blooded Horses.—Messrs. Dodge, Boulware, O. Bowie, Dimmit, Ridgely, Brown and Col. Ware received the premiums award d in that class.

Sheep.—As usual there was a fine display of sheep and a close contest between those eminent sheep breeders, Col. Ware of Va., Reybold of Del. A. Clement of Pa., and Messrs. H. Carroll, W' Jessup, T. Goldsborough, M. T. Goldsborough, J. Merryman and Col. C. Carroll, each one of whom received one or more premiums. The Committee on Sheep in their report thus speaks of some fine wool, for which no premium had been offered by the Society:

"Mr. A. L. Bingham, of West Cornwall, Vermont, by his agent, Jno. Johnson, has exhibited three specimens of the French Merino, most curious and wonderful; and though the committee have not the same familiarity with this species of sheep, to speak with absolute certainty of their aptness to our soil and climate, they, as all others, could not fail to admire the size and form of their bodies, and the exquisite texture of their luxuriant fleeces. There are three bucks of these Sheep, two imported and one Lamb of 7 months, reared by the exhibitor. They are represented as reaching as high as 300 lbs. live weight of carcass, and from 15 to 35 lbs. weight of fleece in the dirt. The committee cannot but believe that their introduction, either in their purity or by a cross on some of our own flocks, would conduce to the productiveness and improvement of sheep husbandry of the Middle and Southern States. They recommend to the Society a special premium for these animals of $20."

The show of Swine was excellent, and is worthy of note, that at this show, no other breeds were exhibited but Chester, China, and Russian crossed with the Chester.

The display of vegetables was the finest ever made at any exhibition of the Society. Col. Oden Bowie carried off the premium for the choicest and largest assortment.

The writer heard General Scott, who was present on the occasion, that he had never seen celery as large and deliciously crisp and tender as that which he saw and tested in this collection.

The Floral Hall and Household department was very fine and reflected the highest honor on the ladies of the State, whose interest in the Society seemed to have increased even since the beautiful exhibition of their skill and industry made at the previous fairs.

The display of Fruits was very gratifying and showed how much horticulture had advanced in Maryland since the Society was first established.

[TO BE CONTINUED.]

THE AMERICAN ANTIQUARIAN, quarterly, Rev. S. D. Peet, Editor, Unionville, Ohio. A very readable journal, especially to all who love to explore regions of the past and find interest in the lore of defunct times, as recorded by objects that are discovered by explorations.

CALIFORNIA WHEAT TAKES THE PALM.—For the best wheat at the Paris Exposition, a gold medal was accorded Hon. John Bidwell, of Chico, Cal.; that sent by him exhibiting the remarkable weight of sixty eight pounds per bushel.

"Belle of Heaven," Ayrshire Cow,

Owned by W. Crozier, Esq., Long Island, N. Y.

THE

MARYLAND FARMER:

DEVOTED TO

Agriculture, Horticulture, and Rural Economy.

Vol. XV. BALTIMORE, DECEMBER, 1878. No. 12

Agricultural Calendar.

Farm Work for December.

Years mark the course of time, and the months are as mile-stones along life's highway. December, the last month of the year 1878, has come, and soon another year will begin. This is the last number of the fifteenth volume of the MARYLAND FARMER, and, while it is not always over-pleasant to the journalist to announce to his readers the close of a volume, it is our lot on this occasion to feel that we have faithfully performed our duty to our subscribers, to feel grateful to a kind Providence that death has erased so few from our roll, and that the labors of the husbandmen have been crowned with unusual abundance. We have been blessed with the most propitious seasons and finest weather almost ever known, and all would be joyful Thanksgiving but for the deplorable visitation of that plague — the Yellow Fever — which, for weeks, caused such terrible loss of life over a wide area of our beloved South.

For ourselves, we have cause for great thankfulness for individual health and the prosperous condition in which the efforts of our friends have placed the MARYLAND FARMER ; and to them, for their aid in procuring recruits in our army of subscribers and correspondents, for their support in payment of subscriptions, and — best of all — their cheering commendation which greatly sustained us in our labors for the common good, we return our heartfelt thanks. Thus we are encouraged to exert ourselves in the future to do our very utmost to increase the usefulness and practical value of the MARYLAND FARMER, and to make each number worth more than the whole year's subscription.

From these reflections let us turn our thoughts to what is to be the work of the month, that we may have all things prepared for the coming of the New Year.

There really ought to be but little heavy work done this month ; if all was done last month that was proper to be done. Though physically the farmer may be not called on to labor hard, he will have his mind taxed to accomplish all that a good system of farming requires of him during this last month of the year.

We presume that the Corn has been housed ; if not, it should be got under lock and key as soon as possible, to save waste and depredations from man, birds and beasts and the numerous wild animals that are laying up their winter stores.

TOBACCO.

Be sure to see that the tobacco houses are tight and safe from storms, and the doors and windows opened in all good weather and closed at night. Those who are fortunate enough to have an early crop and plenty of house-room, and wise enough to hang the sticks wide apart so as to give it plenty of air to cure it bright, would do well now to press it up close together, to exclude as much damp air as possible, or it will change from bright to a dark color. As soon as the stems are dry enough they should be stripped from the stalks and bulked in " wind-rows." to get in shape, and then hung close on small sticks in a dry part of the house, to get perfectly dry ; then put in bulk eight or ten rows, and weight down and left to finish "conditioning" before packing. It will come out of that bulk sweet smelling, with a nutty aroma, and smooth, glossy and yielding as a lady's kid glove. Such is well cured, well managed Tobacco, and will command a good price as soon as offered in the market.

PREPARE FOR WINTER.

Put the ice-pond in fine order ; secure a large supply of dry wood, and coal enough for winter ; gather a large quantity of dry leaves for beds for the stock,— hogs especially,— pack them in pens and cover the top of the pen with straw or corn-talk fodder, or under a shed, so they can be got

at handily during winter. Cover over the barn yard with litter and corn-stalks. Make comfortable shelters, separate, for sheep, colts, calves and brood-mares. Keep them well littered with straw or leaves. See that the hog pens are warm, dry, and have a plenty of leaves, occasionally a little sulphur and salt in their mush or gruel, clean water all the time. Give them rotten wood and charcoal. Make your killing hogs fat as quickly as you can, so as to kill before very cold weather, for they will not take on much flesh or fat in very cold weather.

Gather a large supply of provender, convenient to the barn yard and other places where stock are kept. Have racks, and keep them filled with nice, clean straw, that cattle and horses can have access to it at all times. Straw is too much under-rated as long food for stock. Crush and grind most of the corn you use, instead of feeding it on the ear. Cut the hay or straw, and dampen it so the meal used with it will stick. This is an excellent feed for cows and horses in all mild weather during winter.

See that all the farm implements are put under cover, and all needed repairs done. Do not put off repairing farm utensils and tools until they are wanted. Much time and vexation will be spared if this suggestion be attended to at once. Sell off all your old or indifferent stock and get improved breeds, at least males that are high-bred. Increase your stock of all sorts, sheep particularly, to the highest capacity of your farm. There is money in stock.

Now that the nights are long, an hour or so each night should be devoted to preparing all accounts connected with the farm. The amounts paid out for hire, taxes, implements and stock, and indeed everything that is properly chargeable to the farm; to which add six per cent. on the cash value of the farm and stock, and fifteen per cent. on the cash value of all implements. On the credit side, all sums received from sales of farm products, stock, wool, fruits, butter, poultry, &c.; to which add a fair value for the fuel, vegetables, meats, butter, milk, &c., consumed by the family, house-rent, fruits, and a fair allowance for the keep and use of horses employed in riding or driving for pleasure. Prepare inventories of stock and utensils, or, like a merchant, set down in a proper account all the stock, implements, &c., that you may compare by a true balance-sheet your profits or losses as compared with the previous years. Only in this way can a farmer know whether he is making profits, and to what extent. In this way only can full justice be done the farm. These accounts will show you any errors you may have committed, and suggest to you many matters for reflection and improvement during the coming year.

Having done these things, which we deem essential,—indeed, an imperative duty on the part of every farmer,—you will be prepared to read complacently the MARYLAND FARMER, and be in better spirits to enjoy your Christmas—which we hope will be a happy one for each and all of our patrons.

THE ANNUAL ADDRESS.

Before the Maryland State Agricultural and Mechanical Society, held at Pimlico.

Delivered October 26th, 1878,

BY THE HON. T. F. BAYARD, OF DELAWARE.

Senator Bayard was received with great applause, and stated his desire to mingle with the people of Maryland had caused him to avoid other engagements. He said he recognized agriculture as the chief source of production and wealth, and would like to see a stronger infusion of the intellect of leading men in the agricultural and mechanical pursuits in our representative bodies which framed our laws and moulded our institutions. Mr. Bayard said:

Country life gives not merely the leisure for study, but especially is fitted for meditation and reflection, needed to counteract the heated sensationalism and feverish thirst for novelty so painfully characteristic of the time and country in which we live. From homes in the country, oftentimes obscure and sometimes impoverished, have emerged those men who most potently and beneficently have influenced the history of our country.

Few figures stand forth upon the canvas of history so eminent and admirable as that of John Hampden, the English country gentleman, whose monument records that "with great courage and consummate abilities he began a noble opposition to an arbitrary court in defense of the liberties of his country, supported them in Parliament and died for them in the field." And his compeer in virtue and ability, separated in date by more than two centuries, but who will ever rank with him in history, whose constancy and sound judgment, whose intrepidity and self control have proved such a shield and buckler to his people when beset by difficulties and dangers greater than even Hampden confronted, is to-day supplied

in our own land in Wade Hampton, the planter of South Carolina. [Great applause.]

Away from cities, in an obscure village, James Watt, the inaugurator of our present wonderful condition of mechanical progress, sat watching the lid of the tea-kettle as it rose and fell, until he comprehended the imprisoned power which proclaimed its birth in struggles and demanded and irresistably compelled its release from confinement.

Under our system of suffrage, as conducted in the cities, public expenditures have become so excessive, so wild and profligate, and so large a class of the population have come to look upon the public treasury as their rightful means of support, and the corrupt improvement of private property at public cost has become so common that the power to incur further indebtedness has been withdrawn from the local control of city officials and committed to the restraining influencies of State Legislatures, which are composed chiefly of representatives from the country distriets. Does not this fact constitute a public admission that a more reliable sentiment, a more "saving common-sense" in the care and administration of property exists among the citizens of the rural districts than would seem to control their sharper-witted brethren massed at the centres of population?

Never was there a time in the history of our country when calm, independent and resolute resistance to wild and dangerous popular fallacies was so needed as now.

If, in the midst of such financial distress and bewildermeut as now surround us, remedies. illusory and yet plausible, should be urged,—schemes which promise immediate relief, unbonnded, easy and seductive, and which has caught the popular mind sufficiently to promise the possession of temporary political power to their most conspicuous advocates,—how plain is the duty and responsibility of every man who sees the lurking error and the concealed danger of such measures to bear his testimony in loud warning against them? What answer should the farming classes, the land owners and the hardy yeomen of the United States give to these strange. wild cries we hear going up from the political conventions of parties with new names, that no more rent should be paid for land, no more interest for the use of money, that the precious metals should be discarded, and "absolute money" ordained by law should replace and measure all values and be received for all dues? Who should so strenuously resist all schemes which tend to lessen public reverence for pledged faith, to weaken confidence and to cripple and destroy public (and, of course, private) credit by agreeing to plans for the indefinite postponement of the payment of public engagements according to their terms? What portion of the American people need credit so much and so regularly as the farmer, who has to wait six months between seed time and harvest for his means of payment? If a man would enjoy credit let him denounce all schemes to weaken credit, and insist upon all that will give it strength. To the poor and honest man who needs credit and is compelled to borrow money, I earnestly commend these words What portion of the American people know so well as the agriculturai classes the great fact that all values arise out of labor, and that nothing of value can be had without its share of labor? To whom, therefore, can the fallacy that wealth can be created by empty promises to create it be more apparent, and by whom should it more scornfully and promptly be rejected? Who knows the reality and necessity of steady, continuous manual industry better than the American farmer? and who can better attest the falsehood of a system of currency which instructs men that pieces of paper upon which is printed a promise of payment never to be redeemed, and which can be multiplied indefinitely at the will of any accidental majority of Congress, can ever be a stable and reliable measure of the value of those crops upon the production of which so much human toil, anxiety and care have been bestowed?

The pretended mysteries of the alchemists have long since become the subject of human pity and derision, and surely the attempt now to revive the greater delusion that a printed government certificate of value. not convertible into anything of value, can take absolutely and permanently the place of and perform all the functions of actual value, will speedily be discarded by the "sober second-thought" of the American people. But little more than twelve months ago we witnessed here in Maryland and in other States occurrences growing out of conflicting claims of labor and capital, in which lawlessness raised its horrid front, and shocking scenes of insane and savage destruction of property and life were enacted well calculated to fill every eitizen with apprehension and deep anxiety. So long as public peace and safety are in jeopardy, there can be for all good citizens but one immediate, ever-present and paramount duty — the maintenance of the law; and when law is obeyed, and sits firmly and unquestioned in its rightful seat of power, then, and

only then, and not until then, shall the hearing and relief of alleged injuries and injustice be patiently, calmly and kindly heard, investigated and remedied, so far as legal justice can suffice.

Owing to a variety of causes, which I will not attempt to recapitulate, there is to-day a large body of onr fellow-countrymen unemployed and in want, who are entitled to the most intelligent consideration and most active friendship and assistance. Go into the streets of Baltimore, and indeed of every lesser town, and you will find them idle, but most anxious to be honestly employed. I read, a few months since, the statement of a leading coal land owner and miner in one of the Pennsylvania valleys, in which he assured the unemployed people of his district that all the coal mining now needed could be done with one-half the hands gathered in that region, and that for the other half there was no prospect of employment. These men were to be counted by the thousands, and with their families are to be counted by ten thousands.

When I think of the fair and fertile peninsula on which I live, and of which our dear "Eastern Shore" forms part, I wish from my heart that all of these strong and willing hands of labor could be transported and permanently estabiiseed on Maryland and Delaware farms.

When we cast our eyes across the ocean, either to the east or the west, and see the fearful ravages of death in the starvation of millions in British India and the Chinese empire, or witness an imbruted condition of living humanity with more than the pangs and none of the deliverance of death itself, we can better form an idea of the difficulties of human government under conditions of dense population and insufficient production, and realize the blessings of communities such as as our own Maryland and Delaware, where, under just and equal laws, the results of industry are protected and personal liberty guaranteed, and where a roof to shelter from thc elements, warm clothing and abundant and substantial food are obtainable by any man who, with moderate health and strength, is content to walk with indnstry, sobriety and simple honesty as his companions.

Has there not been for more than twelve years past a steady exodus of our young yeomanry from the country districts to the towns and cities? Is it not a fact that the steady labors of the farm, and the duller occupations and amusements of the homestead, have proved irksome and distasteful to many of the present generation, who have sought in the hot-bed growth of trade and speculation, fostered by paper money, in our centres of population, a more profitable, an easier or more exciting kind of life? What has been the result? The cities are filled with the idle victims of over trade and exploded speculations. Agricultural labor has been abandoned by those most fit for it, and our farmers have been compelled to get along with less competent hands and pay them higher wages. As a result, production has been lessened and at the same time the cost of production has been increased. One obvious cure for much of the distress we now witness in cities and manufacturing centres will be found in the return of the population to the cultivation of American farms, which to-day are at prices far below their intrinsic value because the compensations and advantages of country life and agricultural occupations have not been duly weighed and appreciated.

There need be no fears of over-production of the fruits of the earth by American farmers, so long, at least, as the mad ambitions of European rulers turn that continent into a vast camp or battle-field, and pervert the energies of their peoples to their mutual destruction, and by vast military establishments suck the very life-blood out of the industries they profess to protect. The progress of invention and the application of natural forces to mechanical uses, within the last quarter of a century, is indeed marvellous. Undoubtedly every invention whereby labor is released from any task leaves it free to seek new fields of employment, and thereby production is proportionally increased, and production is wealth, and personal comfort and luxury are the followers of wealth. Whether the laborer is made more intelligent, and his condition on the whole advanced, is a deeply interesting and important question which I will not pause now to discuss.

In considering the benefits of the invention of labor-saving machinery to the laborer, the increased time for the cultivation of his faculties is obvious, and this shows the importance of providing healthy mental occupation. In proportion as mechanical improvement makes personal thought and skill in the operative less necessary, and so tends to deaden his intelligence, the need of food for his mind is increased and should be supplied. The love and habit of reading should be encouraged so that when men and women have leisure it will not be for mischief, but improvement. It seems to me that every sgricultural society ought to own a library of sensible and entertaining books to refresh the weary and attract inquiring minds among the laboring class. [Great applause.]

By good authority we are told that in 1850-'60 the largest cotton crop in the United States—up-

wards of 5,000,000 bales—was produced, and that but two per cent. of the territory especially adapted to its cultivation was occupied. Knowing the peculiar requirements of this plant in soil and climate, and the comparatively restricted area, imagination fails to picture the capacities of this country under the wonderful improvements in mechanics as applied to agriculture, of chemistry as applied to agriculture, and of the means of transporting the products of agriculture; not cotton only, but all the other nnmberless crops so much the less circumscribed as to fitting soil and climate. Surely this land could be the granary and store-house of the whole world.

The skilful cultivation practiced for two centuries in Holland, if applied to the marshes and neglected lands surrounding some of our chief cities, would result in marvellous production. Such, for instance, as at Beemster, where 18,000 acres of the most fertile and valuable land lies sixteen feet below the level of the adjacent sea, and yet was drained in 1612, and so ever since maintained; and some of the finest meadows are more than thirty feet below the water level. And yet Holland, like all the rest of Europe, is glad to use the labor-saving machinery of the United States.

Here is the beneficence of free-trade in thought—each gathering good from the other—all benefited by the discovery of each. In the utilization of what is now regarded as wastes, the American farmers, especially of our own and the more Southern States, have much to learn. The "dung hill," of which so many speak with such contempt, and of which so few appreciate the value, has proved the foundation of solid wealth, well worthy of intelligent care. From the Chinese we may learn much as to this, and every day the ignorant wastes and sanitary dangers of the sewerage of our towns and cities are forcing themselves upon the consideration of thoughtful minds. No farmer but should constantly experiment upon the capacity of his land. It is only by such means that its possible value can be known.

To-day the "balance of trade," as it is called, is effected in favor of the United States chiefly by the cotton crop, yet a wheelbarrow could have carried that crop less than one hundred years ago. In 1782, eight bags (not bales) of cotton were seized in England on a ship from the United States because, it was supposed to be impossible that so much of the fibre could be produced in this country. The very names of calico from Calcutta, and muslin from Moussoul, tell us the Oriental origin of our household fabrics. Rice, of which the production in Carolina and the other Southern States is so extensive and important, is not indigenous to our soil, but is alleged to have started from a single peck of paddy or rice in the husk, given by the captain of a Dutch brig to Governor Smith, at Charleston, in 1694, into which port the vessel had put in distress. Its culture was afterwards, in 1818, introduced into Louisiana by John Law's famous "Company of the West." To-day ours is the finest rice culture in the world. There are now known three hundred species of grasses, and may I not ask why are not many of these found suitable for this region, for profitable cultivation, for grazing and live stock improvement?

In reflecting upon the evils which to day afflict our country, which have prostrated its prosperity and paralized its industries and commerce, I trace the want of the fireside virtues I have named. Ours is a government of laws, but laws moulded by public opinion. In a reformed, regenerated public opinion must we look for the cure of the evils which unclean dishonesty, disregard for truth and honor, unscrupulous private greed and unpatriotic animosities have brought upon us. The family and home circle are the natural birthplace and nursery of the principles which, being educated and established there, expand into the community and pervade the whole body of laws and government with their sober and sweet influences. The care of his family is the just, happiest and proudest duty of the American citizen, and to the American mother is assigned the power and duty of moulding the character of the American man. No written law, no established constitution has created or assigned these duties, but in their just performance rest our chief hopes for individual and national welfare and happiness. [Applause.]

Experiments with Artificial Manures.

The following are from a paper read by Mr. J. B. Lawes, who has been experimenting for 40 years with artificial manures—before the Society of Arts in England, in December of last year;

PERMANENT GRASS.—',The application of artificial manures alone, containing nitrogen, phosphoric acid, and potash, for 22 years in succession, has given an annual average crop of hay of nearly three tons per acre. Twice during the period, a second crop has been cut without further manuring; and it has on each occasion yielded nearly two and one-half tons more."

PERMANENT WHEAT.—"In like manner,artificial manures used alone, supplying nitrogen, phosphoric acid and potash, have given an average, over twenty five years, of 36¾ bushels of dressed grain and more than two tons of straw per acre per annum. The produce of the present year was 40 bushels of dressed grain, and 2 tons, 14 cwt. of straw. No dung has been applied to this land for thirty eight years."

ROOT CROPS.—"In 1876 the produce of roots (mangles), with artificial manure alone, containing nitrogen, phosphoric acid and potash was 22 tons, 11 cwt., and in the present year, (1877,) it has been 22 tons, 2 cwt. No dung has been applied to these plots for nearly forty years."

The Renovation of Worn-out Soils.

We give below the able and very practical Essay of THOMAS MOORE, written 8th month 1801 at his residence, the Retreat, Montgomery county Md.

It needs no comment from us, as it will be read by thousands of appreciative readers, who will judge of its merits and see its applicability to the present times:

THE GREAT ERROR OF AMERICAN AGRICULTURE EXPOSED, &C.

Prejudice, that great bar to improvement in the arts and sciences, perhaps no where exerts its baneful influence with more mischievous effect than in the practice of agriculture, particularly on this part of the American continent. Our predecessors emigrating from the different European countries, each brought with him the prejudices he had imbibed in his native land, and adopted the practice in this country, that he, and perhaps his forefathers, for ages before him, had adhered to, notwithstanding the great difference of soil and climate absolutely requiring a very different course of conduct. Those prejudices acquired strength by time, and practices became venerable for their antiquity: and being accustomed to consider ourselves as the children of the countries from which we descended, of course we looked upon them as the only legitimate sources of improvement; the consequence of which has been, that notwithstanding considerable improvements and discoveries in agriculture have been made in Great Britain and other European countries, we have not derived those advantages from them, which might have been expected. Many of them having been implicitly adopted here, without the necessary variation for the difference in soil and climate, have failed. These unsuccessful experiments have tended to confirm the people of America in their former prejudices, and to induce them to treat with contempt every appearance of innovation in theory or practice.

So that, till very lately, a person in America would be almost as much exposed to ridicule by attempting to teach the art of ploughing, as that of walking, or any other common animal function. But happily for us, since the revolution, some of the citizens of the United States begin to think for themselves, and to seek in their own country for improvements; and during the short period of twenty years since that event, greater advances have been made in American agriculture than in a century preceding.

Under these auspices, I am encouraged to hope that at least a part of the community will not condemn the following observations unheard. I wish my readers to divest themselves of every prejudice as fully as if they had never read a treatise on agriculture, or were acquainted with no system of practice, until they have fairly weighed the arguments; then compare them with their own experience, and according to their merits let them stand or fall.

The native soil of a great proportion of the United States, so far as I am acquainted, or have been informed, consists of a black mould from one to four inches deep (on river bottom, and other low places often much deeper) probably composed from leaves and other decayed vegetables. Immediately below this, is found a stratum of loam, clay or sand, most commonly loam, intermixed with some kind of stone. The mould or virgin soil is always found extremely productive.

The climate, with respect to heat and cold, is various; in the eastern and middle states, the frosts are severe, the surface of the ground being generally frozen for several months during winter; but their severity gradually decreases as we advance southward. In every part of the United States a considerable quantity of moisture falls in the winter and spring, in the different forms of snow, hail and rain: In summer, thunder gusts, with intervals of hot dry weather, are also common.

Let us now consider some of the most visible effects of the climate, on the lands in tillage.

The winter frosts are no doubt useful, in dividing and ameliorating the soil; repairing in some degree, the injury it sustained the preceding summer. During summer, a great proportion of the rains falling hastily, the consequence is. that wherever the ground is not opened to a sufficient depth, to imbide the whole before the surplus can have time to penetrate the hard *pan* beneath, a part of the soil becomes *fluid*; and if the surface is not a dead level, a portion of it, is carried off: the remainder has a tendency to settle into a *compact mass*, which, if suffered to remain, without stirring, through the hot, dry weather, that often succeeds, until the particles of moisture it contains, are evaporated, becomes of the consistence of a *sun dried brick*, and consequently impervious to the roots of vegetables.

These things being premised, I shall, without further observations, proceed to the subject matter, and endeavour to enumerate some of the evils inseperably attached to that great error in American agriculture, *shallow ploughing*; beginning with new lands, or those just cleared of wood.

What is the language of our farmers and planters on these occasions? Our soil is not more than

two or three inches deep; we must plough *shallow*, otherwise we shall turn up too great a portion of *dead earth*, and ruin our crops; they also say, we must plant *wide*, otherwise a drought will cause our corn to fire; and for these supposed weighty reasons, those two practices are almost universally adopted on new lands, to wit: shallow ploughing and wide planting.

Here our men of experience prove they are acquainted with the effect, without knowing, or even enquiring into the cause. Their mistaken opinion respecting dead earth, will be noticed in due place; but it remains here to be proved, that the necessity of wide planting, is one of the consequences attached to *shallow ploughing*. All plants imbibe moisture from the earth by their roots; if this portion of their sustenance is withheld, tho' every other species of vegetable nutriment abounds in the soil, the plant becomes sickly, growth ceases, and finally, death ensues. In search of the necessary supply, the roots of plants are extended in directions, where the soil is open enough to admit them, and to a distance, proportionate to the demand; two plants of the same kind, require a greater quantity, to preserve health, than one: hence it will appear, that a drought of sufficient duration to extract most of the moisture contained in that part of the soil, loosened by the plough, may yet leave sufficient to preserve one plant in health; but if divided, both must suffer, for neither can penetrate the hard unstirred earth below, for a supply. But in case of long droughts, no distance whatever, will insure Indian corn from suffering, when the under stratum is hard, and the ploughing shallow, and under these circumstances; few summers are so wet, but that close planted corn, at some period of its growth, discovers the want of a full supply of moisture, which perhaps might be amply afforded by one or two inches greater depth of ploughing. They have discovered, that after the first year, several succeeding crops will admit of being *closer* planted: the fact is, that the surface having now been for some time cleared of leaves, rubbish &c. and exposed to the action of frost, sun and dews, that portion of earth, lying originally immediately below the black mould, and called dead earth, which was turned up by the cultivation of the preceding year (for in common soils, it is almost impossible to plough so shallow as to avoid turning up some, in new grounds) has now acquired a dark colour, and therefore not known to be the same; and some of the obstacles to ploughing, being removed, they almost insensibly, go an inch or two deeper, without shewing any greater appearance of the yellow or dead earth, so much dreaded, than the preceding year: this furnishes a more extensive pasture, for the roots of the plants growing therein, and also becomes a more copious reservoir for treasuing up moisture for the needful time; and consequently affords a supply for a greater number of plants. The second year, is generally found to be much more productive than the first, after which our common lands gradually decline.

The undecayed fibrous roots prevent much loss of soil by washing, the first year, on lands not perfectly level; it generally begins the second, and continues annually. The ploughing being about four inches deep, does not afford a sufficient qnantity of loose earth, to imbibe the whole of the heavy showers that frequently fall during summer; the consequence of which is, as before observed, that when the open soil becomes *saturated*, water must accumulate on the surface, and flowing off in torrents, bears away a portion of the finest, and most valuable part of the soil; succeeding ploughings brings to the surface a fresh supply of mould, which in turn follows the last. Thus ploughing and washing alternately, following each other; the original soil is soon deposited in sunken places, beds of creeks, rivers, &c.

This waste is in some measure compensated, and fertility continued, by the fresh earth brought up from below; for the plough continuing to pass about the same depth, must of course descend into the unstirred earth, in proportion as the open soil is carried from the surface; but of this the cultivator appears ignorant; the proportion brought up at each ploughing, being small, and soon acquiring a dark colour by being exposed. I am fully convinced, that in many places the surface is now at least the whole depth of the ploughing lower than at first clearing: Of this we need no other proof, than the half buried posts in low places, the heads of rivers, creeks and mill-ponds filled up, which are every where to be seen in our hilly cultivated lands.

But, nothwithstanding the before mentioned supply of vegetable earth from below, the soil employed in cultivation, must annually become less fertile; because the coarse, the heavy and adhesive particles of earth, remain on the spot from the beginning, and those of the same properties contained in the fresh earth brought from below, also remaining, while the finer and more friendly parts, are continually carried away; at length the proportion of fine soil becomes too inconsiderable, to answer the purpose of vegetation to any degree of profit. Thus the land becomes sterile, not so much from the vegetable nutriment being extracted from the soil by the growth of plants, as by the soil itself deing removed; that this is a necessary consequence of *shallow ploughing*, on lands that are in any degree hilly, in this climate, I trust, has been satisfactorily proved.

[TO BE CONTINUED.]

Garden Work for December.

Cabbages, not already put away, may now be taken up and buried, or put under cover secure from rains and snows.

Small Salading, such as Brown Dutch, and Hammersmith Lettuce, Spinach, Kale, &c., must now be given a light covering of straw or brush, to protect them.

Planting of Trees may be done when the ground is not frozen, but they should be well mulched to keep the frost from the roots. The same may be done with flowering shrubs.

Prune Gooseberries and Currants, and plant the cuttings.

Tender Grapes and Raspberries may be laid down.

Strawberry beds should be cleaned, worked and manured with well rotted stable-manure, and the spaces between the vines covered with leaves or straw, and brush or corn-stalks laid over to prevent the leaves or straw from blowing away.

Clean up the garden, and put away under cover the bean poles, pea sticks, trellises, &c., and trench all stiff, hard soil, using plenty of manure.

Some persons, who want very early vegetables, prepare beds and sow Carrots, Parsnips, Onions, and plant potatoes. Cover over well with straw and in early spring remove the straw, and these seeds thus sown will soon come up and be some weeks earlier than the same sorts sown in spring. It is well to experiment on a small scale.

Cold Frames.—See that these are well managed, have enough of them, and let them be well stocked with lettuce, radish, cauliflower and other plants for maturing in winter or setting out early in spring. Nice loaf lettuce in January and February is a welcome dish on the dinner table.

The Fence Question.

Eds. Farmer:—My attention has been called to your article taken from my illustrated circular on the cost of fencing, in your issue of July 13th, and as you request a statement of how I would manage without inside fences, I will simply state that I do not allow a hoof to roam at will over my farm. I will call the attention of your readers, in my awkward way, to a few of the many disadvantages and expenses attending the pasturing system, and contrast them with some of the more prominent advantages of the soiling system.

1st. The expense of all the inside fences used on the farm, for the purpose of protecting the crops from stock allowed to roam over our lands, instead of protecting the stock from the crops. This expense includes the cost of the material used in fencing, and the labor of construction, which, according to the calculations made in my circular referred to,subjects the farmer to an annual tax of $141 for every 160 acres of land, estimating money to be worth six per cent., and in many parts of this State and in Central Ohio this calculation is claimed by good, practical farmers to be rather below than above the actual cost of fencing that number of acres.

2d. The labor of keeping fence rows clean of obnoxious weeds and briers, which are often allowed to ripen their seed, thus polluting the whole farm, and the fence corners are too frequently used as a place of deposit for old stumps and stones, and all manner of filth.

3d. The lost ground taken up by fences, which on many farms amonnts to a number of acres.

4th. The damage done to the soil and growing grass by the continual tramping of heavy stock; which is more especially noticeable on our heavy clay or limestone soils, which comprise our best grain-growing districts. To be convinced of this you have only to notice the barren and unproductive condition of an old roadway which may have crossed your farm, or the path across your field made by your children going to school or to a neighbors; or by pasturing one acre with heavy cattle, and mowing another acre in the adjoining field and feeding it to the same number of cattle. This experimeut would astonish many farmers.

5th. The damage sustained by your stock eating off the grass and clover, which should be allowed to grow, filling the soil with roots, which in all instances correspond in growth of the top, which, when plowed under will make your *land* fat, instead of your steer.

6th The great loss of manure by having the droppings of the cattle scattered over the hard fields, to be washed down the hill sides, or dried up and baked by the hot sun, rendering them as worthless for fertilizing purposes as the buffalo chips found on our Western plains, which are used for fuel by the emigrants.

I will now enumerate some of the advantages of of the soiling system, and perhaps the most important one is—

1st. The doing away with the expense of all permanent inside fences.

2d. The amount of valuable land brought into cultivation by dispensing with the inside fences.

3d. The great advantage gained in the accumulation of a large amount of valuable manure in the barnyard during the summer months, which would in a great measure be lost.

4th. The ability of keeping a much larger amount of stock, if desired, on the same amount of land.

5th. The advantage of having your stock near at hand, saving the time taken in driving them to and from distant pastures.

I will admit that the adoption of the soiling system will render it necessary to perform some additional labor; but I also claim that the cost of fencing and the other items of expense attending the pasturing system as practiced at the present day, would make an amount double what would be necessary to employ a good careful hand to perform all the additional labor created by the soiling system, leaving the advantages as clear gain. I am well aware of the difficulties attending the breaking away from old customs and habits, and establishing new ones. We are prone to do as our fathers did, without considering that they were surrounded by entirely different circumstances.

I would urge all farmers who live on good grain-growing farms to give the soiling system a trial,and when they become used to it they will say that it possesses many advantages which I have not mentioned. But should they not be prepared to endorse what I have said, and give it a trial, I would recommend, as an introduction to the true system, that they make use of a few pannels of some one of the many good portable fences now in use and fence the stock, instead of the farm crops, and in this way they will soon be surprised to see how little fence they can get along with.

In conclusion, I do not wish to be understood as advocating that farmers should abandon the pasturing of those rich but mountainous blue grass regions, or any other rough land, for it is on this class of land, and on our extensive Western plains, that our beef cattle should be *raised*, but fattened in the stables or yards on our rich grain-growing farms.—JOHN HAFER, in *The Ohio Farmer*.

Manufacture of Beet Sugar.

As the recent failure of the Calvert Refinery appears to have extinguished all hopes of reviving the business of converting raw imported sugar into the refined article, the parties interested in that valuable property certainly ought to devise some other use for it. The present condition of affairs affords an opportunity to inaugurate the manufacture of beet sugar, and the success attained by all the nations of Europe that have embarked in this industry proves the practicability of the enterprise. The exhibits of this description of sugar at the Centennial from France, Germany, Belgium and Russia were of excellent quality, and should have induced the starting of similar manufactories in this country before now. The Germans, in the hope of obtaining a supply of the raw product from the United States, are willing to pay at the rate of forty dollars per ton for properly dried beets for shipment. It is said that this would pay our farmers better than corn and require less trouble in cultivation. The beet root sugar from the Continent has caused the closing of most of the English refineries. because they are unprotected by a tariff, and the cheaper article has deprived them of a market. It would have the same effect in this country but for the tariff imposed for the protection of our Louisiana planters. — *Baltimore American.*

History of Beet Sugar in the United States.

BY ERNEST T. GENNET.

[CONCLUDED FROM PAGE 344 MD. FAR.]

In order to produce the quantity of sugar which is at present annually imported into the United States, it requires the average crop of half a million acres of land, and as the beets ought to be raised only once every four years on the same land it would give a rational rotation of crops to two million acres of land. These two million acres would be the standard which the farmer in the United States would look up to. But there would not only be one bushel of grain produced less, there is all reason to believe on the farms where this system was carried through the average crops of wheat would become the same it is in all the beet sugar districts in Europe; 35 bushels per acre instead of 11 bushels, which is the average in the United States. While by far the greatest value the beet sugar industry will bring the farmer, consists in the general improvement of his soil, he would have a cash crop of twenty-five million dollars annually and a feed crop in form of pomice of ten million dollars in addition to what he ever had before.

To work up this beet crop requires 800 sugar houses, and to erect these and furnish them with the necessary machinery will require the expenditure of 80 million dollars, every cent of which would go to our workingmen, mechanics and manufacturers, as we have all the material necessary in abundance, and certainly unemployed hands enough to make them rise as by magic from the earth. To work these sugar factories during winter will require 160 thousand mechanics and laboring men. These figures are not imaginary; they are illustrated in every country in Europe. The consumption of sugar is steadily increasing as civilization progresses, and population increases. Fifty years ago beet sugar made its appearance on the world's market, and has so steadily gained that there is not the slightest doubt that in 1880 more than one half of all the sugar produced in the world will be beet sugar. No country in the world is known where the beet sugar industry once had a foot hold, where it has not steadily extended to the unmistakable benefit of the farming community. It is an indisputable fact that during the last five years of business stagnation the world all over, there have been but two articles of which the demand has been greater than the supply; and that has been raw sugar and gold. The price of raw sugar is steadily on the increase.

As slavery is abolished by advancing civilization the production of cane sugar becomes less, and this will be the reason why the main supply from Cuba in no very distant day will cease, and the United States will look for their supply of sugar to Europe! Are we then still to continue the exchange of agricultural products with Europe by giving them the product of eighteen acres for the return of their crop of one acre? And if we should be improvident enough to be willing to do so, how long can we expect this to continue? The centre of grain raising in the United States has gone most systematically and steadily as the sun towards the West. How long can it last till it reaches the natural limit, the Pacific Ocean? The great difficulty why the beet sugar industry in the United States had so hard a struggle to gain the first foothold was because our system of farming, or to give it the right name, our system of spoliation is antagonistic to the production of root crops, hence the raw material has been lacking. To raise a root crop successfully it is almost indispensable to subsoil the land so that roots can enter the soil to the requisite depth, but systematic subsoiling soon brings tile draining. In fact the introduction of beet sugar means the beginning of a complete change of system, and this requires more than the detached effort of a few individuals; it requires the organized effort of most of our leading agricultural men.

Within the last few years some Governments other than in Europe have made some effort to introduce the beet sugar industry in their States. The Province of Quebec offered some years ago a yearly subsidy of $7,000 for ten years to a successful beet sugar manufacturer, which was followed by a similar offer from the State of Maine, while during the last year the Government of New Zealand has offered a bounty for the first beet sugar made there. Although these bounties to be paid to successful manufacturers can not be called assistance to introduce the industry in the full sense of the word, yet they have done a great deal to draw the attention of those interested in it again to the subject.

This sketch could not be considered complete without referring to the effort made in the State of Maine to start the beet sugar industry on different principles than ever before attempted.

In the spring of 1878 a company was formed in Portland which, while every leading man in it is a practical sugar manufacturer, they decided to leave the farming or agricultural part entirely to farmers. In order to guard against a possible failure from local causes the company extended their operations all over the State, any one geological formation, would produce a superior beet than another. The contracts for raising beets made by the company were with nearly eight hundred farmers for an extent of land ranging from one-fourth of an acre to ten acres; from the most southern point of the Saco valley to the northern part of the Aroostook valley. Besides these farmers who entered into contracts for cultivation of sugar beets, about one thousand farmers have planted sugar beets in the State of Maine, as an experiment, on land ranging from a few rods to half an acre. The readiness with which so large a number of farmers entered into the enterprise on so short a notice, proved that the farmers were ready and anxious to do their part to introduce the beet sugar industry in the United States if only the manufacturers and capitalists would do theirs.

Where the beets have been planted on well manured and good cultivated land, the crop promises a fair yield, in many cases, by far better than farmers expected. Where they have been planted on worn out, poorly cultivated land, they have proved a failure; they have not been able to withstand the drought and heat, and have perished. A number of farmers who have cultivated but one or two acres this year, have expressed their readiness to enter into a contract next year for ten and more acres.

It is too early to state, with any kind of certainty, the quantity of beets which will be harvested, yet there is no doubt but the yield will a be fair one.

More important than the quantity of this year is the quality of the beets. Nobody doubts that with proper cultivation large quantities of beets may be produced; and if half a million of acres will not supply the sugar required in the United States three-quarters of a million will. But the quality, which depends upon climate, soil and many other minor circumstances, is not so easily controlled, and therefore of great importance. Ever since the 15th day of July beets have been analyzed by the Maine Beet Sugar Company, and in giving the result of four different but well cultivated fields, the question as to quality may be considered settled.

The beets from four different fields analyzed had been growing, from the first day the seed was planted, until the 1st day of August, respectively 76 days, 66 days, 59 days and 46 days.

The first had Aug. 1st to solids in 100 juice 10 80 per cent., sugar 6.70 per cent.

The first had Aug. 15th to solids in 100 juice 13.50 per cent., sugar 9.90 per cent.

The second had Aug. 1st to solids in 100 juice 11.00 per cent., sugar 6.90 per cent.

The second had Aug. 15th to solids in 100 juice 13 80 per cent., sugar 10.70 per cent.
The third had Aug. 1st to solids in 100 juice 8.80 per cent., sugar 5.30 per cent.
The third had Aug. 15th to solids in 100 juice 11.40 per cent., sugar 8.00 per cent

The sugar begins to develop after the expiration of the first half of the regular time of vegetation. These results compared with results in Europe of the same duration of vegetation, prove the beets grown in Maine so far fully as good as the best in Europe.

It cannot be denied the final result of Maine enterprise will largely influence the introduction of beet sugar industry in many other states of the Union.

For the sake of many thousand unemployed working men, for the sake of many thousand farmers who know that their only salvation lays in the more rational cultivation of their homesteads who know that without rational rotation of crops improvement is impossible, let us hope the enterprise in the state of Maine will succeed.

What the beet sugar industry has done for every country in the world wherever it has been introduced, it will undoubtedly do for the United States. No nation in the world, so history teaches us, was ever great and prosperous without prosperity in agriculture. Julius Ceazar could conquer half the world, but he could not prevent the decay of farming, and, with it, the downfall of the Roman Empire. The decay of Spain conclusively proves the decay of agriculture in Spain. The downfall of every nation has been invariably preceded by non-productiveness of its fields.

Domestic Manufacture of Beet Sugar.

We give below a concise, practical letter of Mr. ANDREW H. WARD of Mass., written for the "Bridgewater Independent," showing that every farmer can grow beets profitably and make all the sugar needed for home consumption at but little expense, and that it is as easily made as maple sugar. The pomace would pay well for growing the beets, in feeding cattle and hogs. The juice made into sugar would be clear profit:

"In reply to "Bleizucker's" communication of April 25, I will say the difference in making sugar from beets and from maple sap is, that the juice has to be first extracted from the beets; this does not require more costly machinery than the cider press and grater—that made by the Boomer and Boschert Press Company, Syracuse, N. Y., (I send you one of their circulars, giving plan and cost of building, press, grater, elevators, engine and boiler, tanks, pumps, etc., the whole cost of which is $2,360), has a capacity, with the labor of two men, of grating and pressing 725 bushels of beets per day of ten hours, and yields 5,262 gallons of juice. The press and grater alone costs $510, and requires less than six horse power to run them. The beet juice is boiled down the same as maple sap, sorghum or cane juice, and requires no more labor or skill, and can be done as economically on the above quantity as on a large amount. It needs no costly machinery, such as "centrifugals, hydraulic presses, vacuum pans, or filtration through bone coal, etc." These and other requisites are all needed in the *refining* but not in the *manufacture* of sugar; they are separate branches of business, but sometimes both are carried on by the same person. The sugar refineries in this country import the brown sugar, and refine it. They would without question, as readily buy the brown sugar made here, as to import it; and, refineries being already established, it is better to send the brown sugar (what is not consumed in that form) to the refineries that already have the necessary machinery and skilled labor to run them, than to start new ones; it would be a question of cost of freight against the interest on capital invested in refinery. At present, there is no doubt it would be best for the farmer to sell his surplus sugar not needed for home consumption; or, if refined is wanted, he can sell his brown sugar and buy refined, as the farmer now sells his wheat and buys his flour, or has it manufactured for him at the mill.

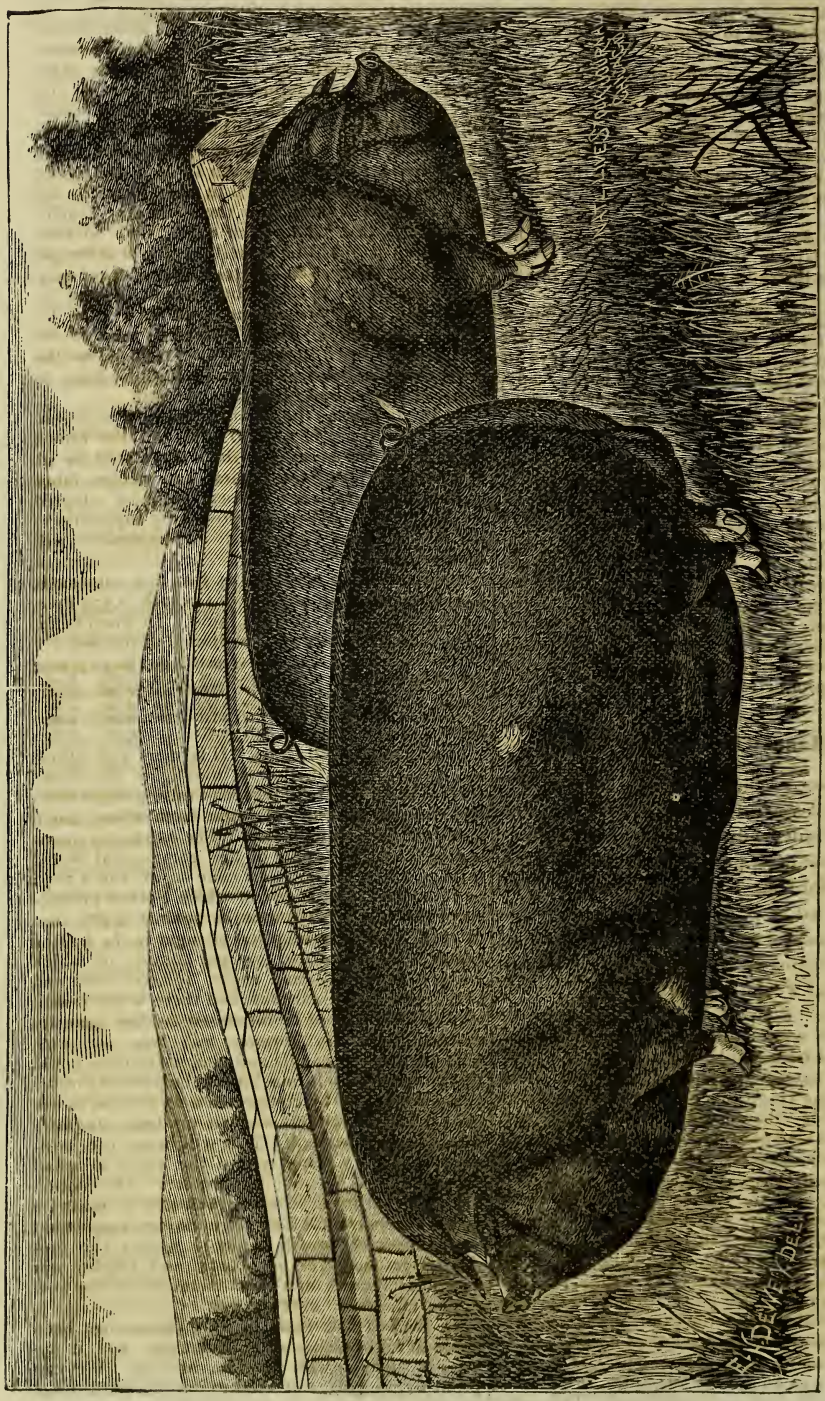
In the future, as the business grows, the present refineries will not be able to refine all the brown sugar produced here, and then there will be no difficulty in getting the capital and skilled labor to start other refineries in locations best adapted for them, or to enlarge the producing capacities of the present ones; time and circumstances will regulate this.

1.000 lbs. beets contain 184 lbs. dry substance, 1.60 nitrogen, 7.10 ashes, 3 914 potash, 0.379 lime, 0.536 magnesia, 0.780 phos. acid. In manufacturing, these elements are distributed as follows:

	d. s.	nit.	ashes.	pot.	lime.	mag.	p. acid.
Tops & Bottom	19	0.24	1.15	0.336	0.108	0.132	0.144
Fibre	46	0.44	1.71	0.585	0.390	0.100	5.165
Refuse	24	0 60	1.20	0.380	8.640	0.250	0.380
Molasses	25	0 32	2.47	1.741	0.141	0.009	0.015
Sugar	85		0.57	0.872		0.040	0.072

"Bleizucker" well states, "If farmers and others interested can be incited to investigate for themselves the real facts in regard to raising sugar beets and the manufacture of sugar from them, much good will be accomplished." The estimated quantity of the sugar supply of the commercial world in 1875 was 2.140,000 tons cane sugar, and 1,317,623 tons beet-root sugar, of which France produced of this last 426,259 tons, as against 4,465 tons in 1828. The consumption of sugar in the United States is about 700,000 tons per annum, of which we now produce—cane sugar, 100,000 tons and beet-root sugar 1,000 tons, and there is no reason why the last cannot be increased to the quantity we require, *if the farmers will raise the beets.* The present cider mills and cheese factories could add to their present machinery the pans or presses as required, and by co-operation on this, as in regard to other products, we can produce *profitably* all the sugar we need. This will bring the business of sugar making within the reach of small farmers, and is of vast importance. The notion prevails, that to make sugar profitably it must be made extensively. This is certainly erroneous; and the sooner we will begin to realize the productive resources of our lands, and employ our now idle laborers on a very remunerative crop now grown to a very limited extent.

In the last 100 years great progress has been made in all branches of manufacture, and it applies to sugar as well as other articles. We can profit by the past, but need to look forward to the future."



MAGIE OR POLAND CHINA SWINE,

OWNED BY THE D M. MAGIE CO., OXFORD BUTLER COUNTY OHIO.

Live Stock Register.

Origin of the Magie or Poland China Swine.

The Company say:—It might be interesting for Swine Breeders to know the origin of the Magie or Poland-China Hogs. Mr. D. M. Magie, the senior member of our firm, originated this breed of Swine from the years 1837 to 1840, inclusive. They were produced from four pure and distinct breeds of hogs, viz: Poland, Big China, Irish Grazier and Byfield.

Our hogs are of fine bone, but large size, combining more eminently than any other the excellencies of both large and small breeds, being docile, very good feeders, breeders and sucklers, fattening readily at any age and yet attaining great weight at maturity.

They sometimes dress 350 lbs. at from 10 to 12 months old. From 18 to 20 months old, 500 to 600 lbs. They have long bodies, short legs, broad straight backs, deep sides with square heavy hams and shoulders. For purity of blood and good breeding, these hogs are unsurpassed by any other breed. They are large and fine, and dark colored have drooping ears, are of very fine style and may be relied on. Many people know these hogs by the name of Poland-China, others by the name of Magie, and some as Butler Co., and Warren Co. hogs; but in their pure state they are the same breed of swine. They have been an establisheed breed for about 35 years. The experience of the best breeders of swine in this country, that have bred and experimented on the various breeds of note, have in every instance, where it has been our privilege to be acquainted with the parties and circumstances, decided that the Magie or Poland-China hogs are much to be preferred above all others.

Suggestions for Intending Breeders.

The man with a hobby is usually looked on with a little suspicion or ridicule; but if not allowed to run away with him, I strongly believe the possession of a hobby is a good thing, and for few men more so than for the farmer. If he gives his whole attention to the hobby, it is a bad thing to have, but wisely managed it may be, and often is, a means of making the routine work of the farm pass off pleasantly, because this is made to bear on the success of the hobby. Suppose a farmer takes so much interest in destroying weeds that his neighbors say he makes a hobby of this; is it not a help to his farming in almost every way? He will give better cultivation to his crops; will keep his fences in better shape; and will probably be more ready to do needed drainage.

Of all this class of hobbies I know of nothing so well calculated to interest the mass of farmers as the breeding of fine stock—and by fine stock I now mean simply that which is, or is believed to be, better than that surrounding it. There is a pleasure to most minds in watching the growth and development of either a plant or an animal, but with the larger number the animal has the preference. In either case the pleasure is much increased if there is the belief that, through his own skill or effort, the owner has secured more than usual excellence.

In the largest number of cases the best course to pursue is to select as good specimens of the common stock of the vicinity as can conveniently be secured, and "grade up" by the continued use of well-bred sires, but in a very large number of cases it is entirely practicable and advisable for farmers in a small way to be breeders of pure-bred stock of some class.

It is rarely wise for a beginner in breeding, certainly if he have but little capital, to invest in rare or little-known breeds. There are but few men who are well adapted to the work of introducing and securing popularity for a breed of animals. The average farmer cannot offord to do a great deal of missionary work. I would always select a well known and popular breed, unless firmly assured the new one is very much superior.

Almost absolutely without exception it is unwise for any except those with considerable capital and somewhat large farms to engage in breeding more than one breed of a class.... The first expenditure had best be comparatively small; especially is it unwise, although not uncommon, for a beginner in breeding to erect large and costly buildings for his stock. So, too, it is not necessary to buy a large flock or herd at first. It is more satisfactory to grow as a breeder than start out full-fledged. By selecting two or three, at most a half-dozen females, one is able to secure greater uniformity in his future herd, and can feel that its merit will be largely due to his own efforts. Any one with money enough can buy good animals, but the pleasure in the ownership of such must be less than where one can say, "The entire herd is my own breeding." Even with cattle but a few years will elapse before a fair-sized herd will have grown from even two or three cows, and with the increasing herd has come increased experience in its management and the sale of the surplus.

While extravagant prices are not advisable, especially for the beginner, it is better, as a rule, to let the foundation be really good. It is better, unless marked differences in price exist, to buy the foundation stock for a pure-bred herd not only of a popular breed, but of popular families in that breed, and of well-known breeders.—G. E. M. *in National Live-Stock Journal.*

Imported Scotch Collie, 'LADDIE," Imported and Owned by D. Z. Evans, Jr.

Scotch Collies.

Herewith we give a cut of a fine specimen of a Scotch Collie shepherd dog, *as he really is*. This cut was taken from a sketch of "Laddie" from life by the eminent artist, Mr. Wm. Wilcox, of Philadelphia, Pa., who is now engaged in making a handsome oil painting of this fine dog. This breed of dogs has been bred for so many years for usefulness, it now stands unrivalled. Farmers, stock breeders and poultry fanciers are gradually finding out their great value, and the demand for well bred pups of this breed is rapidly on the increase. They daily save their masters hundreds of steps aud much annoyance in herding and driving the stock, while they are unexcelled as watch and farm dogs.

The most satisfactory way to do in purchasing a Collie, is to buy a pup, instead of a full grown dog, and then accustom him or her to your particular way of having things done, and you cannot find any reasonable fault with the way he takes to his work, for well bred ones are noted for their matchless intelligence ; the expression of the eyes and face denoting a mind capable of an almost endless amount of training. They are natural sheep and stock dogs, but must be first taught how you want the work done and must get acquainted with the stock and the stock with them, before you can expect them to do their duties satisfactorily.

They are a very affectionate animal, but know full well where to place their affections.

Full grown, well developed specimens of Scotch Collies measure in height at the shoulder from 18 to about 22 inches. In the rough coated kind, the hair is full and heavy, and from that to a heavy brush, and is carried over the back when in excitement. Many prefer the smooth coated Collies, while others like a cross between the two, all of them being equally good in point of usefulness. Colors are various, ranging from a black and white; black, tan and white ; fawn and white ; black and tan, to irregular mixtures of the colors named.

Success of Maryland Berkshires.

Bel-Air, Md., Nov. 15th, 1878.

Editors Md. Farmer :—Thinking you would like to have a list of the winnings of my herd this year, I enclose the following list of them.

Very truly, ALEX. M. FULFORD.

At the fairs this season, my stock has taken the the following premiums : At the Maryland State Fair, six first premiums ; at York, Pa, five first and two second ; at Frederick, Md., seven first and one second ; at the Virginia State Fair one first and two second ; at the North Georgia Fair, Atlanta, two first and two sweepstakes ; two of my animals winners at the last mentioned place,and there sold were exhibited and won first prizes at the Georgia State Fair, making a total of thirty premiums won by my exhibits. All but three animals shown by me, were bred by me, and these three have long been used in my herd as breeders.

AYRSHIRE CATTLE.

Long Island, N. Y., October 23rd 1878

Eds. Maryland Farmer:

MY DEAR FRIENDS :—As requested, I send you the cut of my old Ayrshire cow, "Belle of Beaven" imported and bred by James Finly, Monkland, Scotland, and herewith send you notes how to judge a good Ayrshire cow, as I believe they are the farmers' cow of to-day—please attend to the points.

Her head should be short and her muzzle good size ;
Her nose should be fine between muzzle and eyes;
Her eyes full and lively ; her forehead ample and wide ;
Horns wide, looking up, and curved inward beside ;
Her neck should be a fine tapering wedge,
And free from loose skin on the undermost edge ;
Should be fine where 'tis joined with the seat of the brain ;
Strong and straight upon loin without hollow or mane ;
Shoulder blades should be thin where they meet at the top ;
Let her brisket be light nor resemble a crop ;
Her fore part recede like the lash of a whip,
And strongly resemble the bow of a ship ;
Her back short and straight, with the spine well defined,
Especially where back, neck and shoulders are joined ;
Her ribs short and arched, like the ribs of a barge;
Body deep at the flanks, and milk veins full and large ;
Pelvis long, broad and straight, and in some measure flat ;
Hock-bones wide apart and not bearing much fat;
Her thighs deep and broad, neither rounded or flat ;
Her tail long and fine and joined square with her back ;
Milk vessel capacious, and forward extending ;
The hinder part broad and to body fast pending ;
The sole of her udder should just form a plane ,
And all the four teats equal thickness attain ;
Their length not exceeding two inches or three ;
They should hang to the earth perpendicularly ;
The distance apart, when they are viewed from behind,
Will include about half of the vessel you will find;
And when viewed from the side they will have at each end
As much of the vessel as between them is penned;
Her legs should be short and bones fine and clean;
The points of the latter being quite firm and keen;
Skin soft and elastic as the cushions of air.
The colors preferred are confined to a few,
Either yellow or brown, mixed with white ;
The weight of the animal leaving the state,
Should be about 600 pounds sinking offal.

Such are the points given by the Ayrshire breeders who have now bred them for over a century, and one-half the Ayrshire dairymen knows what it is to have a producing cow ; not *fancy* they live by, but by *produce* of the best dairy cow, and I believe such is fast becoming the practice in this country, as the Ayrshire is more sought after year by year and where they are kept for practical use, the owners will not part with them.

Respectfully yours,

WILLIAM CROZIER.

HEREFORD CATTLE.

Though the Hereford breed of cattle has not as yet been exclusively introduced into this section of the country, its excellences are commanding the situation at many other points, notably in England, Australia, South America and in our own western country. It is a matter of record that not only in the London market have they been quoted from one to two cents a pound above the Short-horns, but the records of the Smithfield show will witness that the Hereford steer has a record over the Short-horn, and the same record shows that the Hereford steer has made as good weights as the Short-horns, at any given age. And now the Bath and West of England Society has awarded the two champion prizes, for best male and female in the show, to the Herefords. Coupling this with the fact that during the same record he has always brought better price, and another established fact that he has always been a more economical feeder and grazer, is it not strange that the press and agricultural societies have not been more ready to encourage them?

A recent sale of 100 Hereford bulls in England for shipment to the grazing regions of Buenos Ayres, shows the estimation in which this famous stock is there held. The Herefords have made more rapid progress in public favor at the West in the last five years, than ever was made by any other breed of cattle in America in the same time. In Colorado and Wyoming, there are several herds of from 20,000 to 60,000 head, that are using all the Hereford bulls they can get ; and already at the Union Stock Yards at Chicago, and at the St. Louis and Kansas City Stock Yards, these steers are commanding the top prices, while five years ago they were not known in these yards. In five years more they will be quoted at all of these markets, as they have been in the London market in England for the last 100 years or thereabouts.

The Hereford cattle are tough, hardy and thrive on a diet both in quality and quantity that would be unprofitable in the Short-horns. The cattle are very large sized, make excellent beef, are fair milkers, especially when crossed with other kinds, and are withal quite handsome being red bodied

with white markings and a white face, the latter being an invariable mark of the kind. Among the herds of cattle, exhibited at the recent New England Fair at Worcester, none attracted more attention than the herd of Herefords owned by J. S. Hawes, of South Vassalboro, Me. He showed thirteen Herefords, among which was a thoroughbred bull, "Highland Chief," the largest on the grounds, but five years old and weighing 3 000 pounds, having a length of eleven and a girth of nine feet, one bull and two heifers, also three calves, five months old, which he engaged to parties who design sending them to a ranche in the West, where they are breeding stock to ship to England. The price stipulated was $300 for the trio, The Hereford cows, on exhibition weighed between 1,500 and 1,600 pounds. An enlarged popularity in this country is predicted for the Hereford breed of cattle—*American Cultivator.*

For the Maryland Farmer.

Sheep and their Profit.

Messrs. Editors:—You know I had, in by-gone days, somewhat of a sheepish reputation ; I believe most farmers think there is profit in sheep, I agree with them in the fact, but differ as to the best mode of obtaining the most profit. The present plan pursued is to purchase a lot of common (Western) ewes in the fall, put a buck with them, and in the spring sell the wool and also the lambs; this certainly gives good profit on the sum invested. The ewes and lambs are low priced and takes a number of months to make a small sum clear, but if they are satisfied, it is all well—my plan was different, I bred from thorough bred Cotswold bucks, saving the best ewe lambs until I had a flock pretty deep in the blood. I sold a lot of muttons the fall after one year old from grass for $10 each, their fleeces were heavy and paid well for their keep ; their droppings more like calves, and of course richer fertilizer. I ascertained clearly the saddles of this lot of muttons sold for $35 each, the Hon. Daniel Webster bought several of them. The next lot I sold from grass, some one year old, some two, for $35 and $25 each for New York market, all my sales were on the farm. After they reached New York, the butcher propsed contracting with me to give me $100 for each mutton I would bring to their weight, which I could easily have done—the war broke it all up. Three of my part bred muttons were fattened for a rival contest at 2 years old ; one weighed alive 322 pounds, dressed 234 pounds, the other two were twins, one weighed alive 285 pounds, dressed 202 pounds, the other weighed alive 286 pounds dressed 192 pounds, and sold all for $1 per pound. I had a yearling buck that weighed 430 pounds alive. If my plan is not the most profiable to me, there was pleasure in ocserving and breeding such sheep.

Berryville, Va., Nov. 4th. J. W. WARE

HORTICULTURAL.

GRAPE CULTURE ON THE POTOMAC.

A Paper read before the Potomac Fruit Growers' Association

BY ROBERT A. PHILLIPS.

As this association is named and known as "The Potomac Fruit Growers," while we are sailing down the beautiful river whose name gives us, as a society, our identity, it is a very proper occasion to inquire what kind of fruit these beautiful shores will produce with the greatest snccess as to quality and profit. I believe that, at no very distant day, it will be determined that the preference will be given to the particular fruit which has been selected for our consideration. History informs us that from the earliest ages the cultivation of this luscious and healthful fruit has received more attention than all the other fruits of the earth which the Creator gave for our sustenance, our pleasure, and our health.

Grape culture has been a constant attendant upon civilization, following it from country to country, each country having its own peculiar indigenous varieties. When our own favored land was discovered by the noble Columbus, the most important of all its fruits was the grape, many varieties of which were found growing in great luxuriance, and yielding annually bountiful supplies of their delicious clusters, to delight the savage aborigines, who were as new a variety of the the human race as were the new varieties of this fruit, thus, for the first time, made known to the other inhabitants of this great world in the Eastern hemisphere. Of the native grapes of this country, none have been found, however, that favorably compare with some of the better sorts grown so extensively in different parts of Europe, and in some of the Islands of the sea. Except in a few isolated cases, the same species of vine that thrives so well there, has entirely failed in this country, and after many years of patient labor in importing, and experimental trials, all hope of successfully producing them in the open air has been abandoned with, I may say, the exception of southern California. And although we may regret that the European grape is unsuited to our climate, yet we may congratulate ourselves that we have indigenous species from which new varieties have been produced which rival in point of *flavor*, at least, any of the foreign ones. And we are enconraged to hope for an improved native grape which shall equal the European grape in every good quality. Cultivators of the vine in this country have had very many obstacles to contend with. Those who had been accustomed to the fine grapes of Europe, could see nothing in the inferior native grapes of this country to induce them to cultivate them, and for many years the vineyards in this country were exclusively planted with foreign varieties, which invariably failed, and the vineyardist believing there were none of our indigenous vines worthy of his attention, replanted again and again with new importations from the choice varieties of other countries, principally from Europe, and found his trouble as often rewarded

only by disappointment and failure. After two centuries of unsuccessful attempts to grow the foreign grape in open culture in this country, pomologists turned their attention to the improvement of our native species of vine, and their experiments have been crowned with success in giving us many choice and beautiful varieties. It is only since foreign varieties have been discarded for our hitherto neglected native sorts that vine culture has become established as an important branch of American industry, and is rapidly increasing annually. Thousands of pounds are now produced where one pound was grown only twenty-five years ago, and this beautiful and healthful fruit being now within the reach of all, its consumption has increased as rapidly as its production, and during its season of ripeness the grape has become the *favorite* fruit of the million, thousands of tons finding their way to our cities and towns, where a ready market awaits them for a table fruit; and thousands of tons are annually made into pure and healthful wine, and it is to be hoped that it will be so extensively manufactured that it will, ere long, be substituted for the much more intoxicating spirits so much used in this country, and so little used in the extensive wine producing countries. I will now give you a short sketch of my own experience in vine culture, near Washington. At about the close of the war, in this country, I purchased several hundred acres of land within sight of the Capitol, and in looking it over. to determine for what the soil was best adapted, I discovered a great many wild, native grape vines, of most luxuriant growth, many of them running to the top of the highest trees, and some as large as six inches in diameter near the ground. Nature could not speak more plainly. I determined to plant a vineyard, believing that cultivation would certainly show as good results as nature unaided. I procured two-year old vines, at a fabulous cost, as they were then scarce, high, and in great demand, and planted a vineyard of only about three acres After having prepared the ground carefully and thoroughly, by ploughing and subsoiling to a depth of about sixteen inches, the ground having a moderate slope to the east and southeast, planted eight feet apart each way, setting a stake at timeplanting to each vine, and cutting the vines back to witnin about six or eight inches of the ground, running the rows across the hill and mixing with the soil, about the roots, of ground bone about one quart to each vine; when they had grown sufficiently to determine the strongest shoot, the rest were all rubbed off aud but one shoot allowed to grow that year. The next year the vine was again cut down, leaving but two eyes of the previous year's growth and the canes allowed to grow about four or five feet long and were thus pinched off at the terminal bud to make more stocky and stronger canes. The third year the experiment becomes interesting. The year has arrived in which we may expect to realize the result of two long years of labor, hope and patient waiting. The stakes are removed and instead, a wooden trellis is erected, the two canes of each vine are extended like two arms along the bottom of the trellis. All this time the ground has been well worked and kept clear of weeds and grass. This third year each bud becomes literally a "bud of promise," and all are allowed to grow, and as they grow each shoot bears from three to four bunches of grapes, and as the vines reach the top of the trellis a beautiful sight is presented, each row forming a step-like terrace across the side hill. When September 1st was reached the grapes were ripened perfectly, and my experiment proved thus far a great success. It was the first vineyard planted in that vicinity and attracted a great deal of attention, especially at the time when the first crop ripened. A great many people came to see, and all expressed gratification and surprise upon beholding such a beautiful display of the most perfect clusters of grapes. An extensive fruit dealer of Washington admired them to the extent of purchasing the entire crop at 15 cents per pound, probably the highest prices ever brought in the United States, on the vine, An unusual number of gentlemen called one day, at this time, to see the vineyard, to whom I suggested that as there was so much interest manifested in fruit culture, we should organize a fruit growers association, which suggestion, meeting the views of all present, a meeting was appointed to that end at my house the next week, Monday, it being September 14th, 1868. Although the day was unpropitious, dark and rainy, thirteen gentlemen assembled in my parlor at North Arlington, and then and there was born "The Potomac Fruit Growers' Association."

A very important point to be considered in planting a vineyard is the varieties to select for planting. Among the eighty native varieties found in this country, not including a great many new seedlings and hybrids, there are indeed but few that combine the most desirable qualities for the table and for wine, and none that combine so many good qualities as the Concord. It has been styled "the grape for the million." It is very hardy, a very prolific bearer, and has done better in this latitude than any other variety. How long it will justify so favorable mention, it is difficult to say, as it has decaded to a very serious extent, while in the process of ripening, for several years, the last year it having proved nearly a failure. But this experiment has proved that the Potomac region may become as noted in America for its extensive vineyards as the Rhine, the Rhone, the Seine, and their tributaries in Europe.

> "The vine too, here her curling tendrils shoot,
> Hangs out her clusters glowing to the South,
> And scarcely wishes for a warmer sky."

The vineyards of Europe are composed solely of the varieties of a single species of the vine, *and that* a foreign one, transplanted to her soil, In our own country numerous species and varieties are everywhere met with, springing up spontaneously in our woods and prairies, nature's own gifts, unaided by culture or toil. Something of the extent to which the vine is grown in Europe can be estimated by some facts in that connection concerning its culture in France where two million laborers are employed in cultivating five million acres devoted exclusively to grapes. The vine flourishes throughout our broad land from the St. Lawrence to the Gulf of Mexico, and from the shores of the Atlantic to the Pacific, although some sections have been found much better adapted to particular varieties, because of difference in soil and climate and other conditions.

THE

MARYLAND FARMER,

A STANDARD MAGAZINE.

DEVOTED TO

Agriculture, Horticulture & Rural Economy.

EZRA WHITMAN,

Editor.

COL. W. W. W. BOWIE, Associate Editor.

141 West Pratt Street

BALTIMORE.

BALTIMORE, DECEMBER 1, 1878.

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One dollar and fifty cents per annum, in advance Five copies and more. one dollar each.

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For Two Hundred Subscribers, at $1 00 each, we will give a Two Horse Iron Axle Whitewater Wagon, value $100 00

These articles we warrant to be first-class.

FIFTEENTH VOLUME OF

THE MARYLAND FARMER.

This is the 12th number of the 15th volume of THE MARYLAND FARMER ; and we claim it has been published longer continuously, without cessation, by the same publisher, than any other farmer's journal in this or other States south of Philadelphia.

A *popular* magazine,—as attested by our subscription list, frequent kind letters from parties, and the notices of our brethren of the press in this and other Southern States,—and is also a *great advertising medium*, as shown by the numerous new advertisements in the present number.

During the coming year, we shall allow nothing to prevent our making it superior to all former issues, and maintain beyond dispute its high character.

Its aim will be to admit nothing in its columns like Theory, unless based on science controlled by reason ; nor anything called Practical, unless proved by successful experiments.

If our old subscribers will do us the favor to canvas for THE MARYLAND FARMER, by showing it to their neighbors and soliciting the subscriptions, they will confer a great favor on us, and we do not doubt, confer a greater profit on the new subscriber.

☞Our friends can do us a good turn by mentioning the MARYLAND FARMER to their neighbors, and suggesting to them to subscribe for it.

☞We call attention to our Reduction in Price of Subscription.

YOUNG MEN!

It is an easy way to make money by getting subscribers for THE MARYLAND FARMER. Send 15 cents for Specimen Copies, and ascertain what Liberal Commissions we will allow.

ADVERTISERS.—While we are gratified to perceive from the large number of advertisements in the MARYLAND FARMER—increased monthly—that our journal is appreciated as a profitable medium, yet we are surprised that Farmers who have stock of all kinds for sale do not advertise more freely ; merchants properly estimate the value of advertisements, while farmers lose hundreds of dollars by not doing as the merchants do. We have daily enquiries where poultry, eggs, sheep, cattle, horses, &c. are to be had, and at what price. We can not answer in all cases. It is true we have an agency ourselves for the purchase of such articles, but we would have our patrons deal personally with the owners, who advertise.

ATTENTION! SUBSCRIBERS!

SUBSCRIPTION REDUCED TO $1.00 A YEAR, IF PAID IN ADVANCE.

Our subscribers will find in this number, our *Prospectus for* 1879, and please notice the important change in the price, being a reduction to $1.00, if paid in advance. While we thus reduce the price *one-third*, we hope not to suffer loss by it, believing that our subscription list will be thereby more than doubled, satisfied that our friends will sustain our efforts in lowering prices to suit the times, by each one exerting himself to get one or more names to swell our roll of subscribers. Thus our subscribers reap the advantage, while we may not lose.

It was 15 years ago this month,—in those dark days of 1863, the MARLAND FARMER was started by myself, with Col. S. S. Mills as associate. At that time it was considered a hazardous attempt to begin the publication of an agricultural paper in this city. The *American Farmer* and the *Rural Register*, both good papers, having failed to sustain themselves and had become *extinct*, and the farmers of Maryland were left without an organ.

My life having been spent in agricultural pursuits, and in efforts to perfect the adaptation of agricultural machinery to the wants of the farmer, I felt that my interest and that of the farmer and planter were closely connected, and hence farmer and mechanic should have some journal in Maryland suited to their wants The MARYLAND FARMER was thereby started, and has continued to this date, under shade and sunshine, with no rival *for* 10 *years* in its field of usefulness—battling for the rights of farmers at great cost of labor and money, and regardless of consequences; so it received the approval of those who patronize it.

In returning thanks to our host of well-tried and valued friends for their past support, we feel safe in saying to those who may become new subscribers, that if they refer to our old ones they will be assured that we have maintained the promise given in our first appeal to our readers in 1864—"Our desire is to make the 'Farmer and Mechanic,' a welcome guest at the fireside, and a suggestive companion in the field and workshop." We proudly say we have fulfilled, and more so, our promise thus given fifteen years ago.

E. WHITMAN,
Editor and Proprietor.

International Dairy Fair, commenced on the 2d inst., and will continue for six days, at the American Institute, New York city. It is one of the most important fairs ever held in this country.

The Commissioner of Agriculture.

We give the following extracts from a late editorial of our highly valued cotemporary—"*Our Home Journal*," of New Orleans, in defence of Gen. LeDuc:

"Not very long ago we entered our earnest protest against the senseless abuse which it has become fashionable to bestow upon Gen. LeDuc, Commissioner of Agriculture. We are greatly surprised and mortified to see some of our leading agricultural journals joining in this attempt to render the Commissioner unpopular among the masses and obstructing, so far as they can, the endeavors of this worthy officer to disseminate correct agricultural knowledge.

* * * * *

"If Gen. LeDuc cannot make tea growing profitable in this country, he has demonstrated the fact it can be grown as a farm diversity, saving thereby many a dollar to the consumer and the country. If he does not succeed in getting as much saccharine matter from corn stalks as we express from cane, he has proved that the country can supply itself from this source alone, in case the usual channels of supply are closed. If he has been humbugged with Minnesota Amber Sugar Cane, can we not forgive him in view of the fact that he has introduced a plant that can be converted into sugar from June to December, quantity and quality being little, if any inferior to the best ribbon cane?

* * * *

"He does not content himself with the *honors* of his position—he strips himself to *the work* before him. Such a man will make his mark in the world. He will push his investigations in the interests of agricultural knowledge in every direction. We confidently predict that his administration of the Bureau of Agriculture will be successful, that our law-makers will be obliged to listen to the demands of the farming classes and make the Commissioner a Cabinet officer."

We ourselves admire the vim displayed by the General in pushing inquiries into those subjects which, if resulting in practical success, will redound to his fame and add millions to the wealth of our people. If half the tea can be grown here that our people now import, and if from corn-stalks (heretofore worthless even for manure) sugar can be cheaply made in every farmer's family, and if beets, cane, sorghum and corn can be made into sugar, enough to supply at low prices our home markets, then, our nation would be less dependent on other countries for these necessaries, our people would retain at home millions of treasure that go out to foreign lands, and

employment would be given to tens of thousands who are now suffering from want of work. In connection with this, we give elsewhere a practical and sensible letter from the Rev. Mr. Meech, of Vineland, N. J., showing what can be made of *corn-stalks*, by any farmer who chooses to do the like, with no extra expense for machinery, &c., beyond ordinary farm implements and a little labor that women and boys can do. This communication of Mr. M. shows that Gen'l LeDuc's efforts in this direction have excited the attention of farmers and we would not be surprised if before long, sugar making from corn-stalks became a common industry in the whole country. That the juice in the corn-stalk was rich in saccharine matter, has long been known, but it has been reserved for Gen'l Le-Duc to practically test the fact and induce our people to make an effort to utilize the idea for their comfort and welfare.

NOTICE TO SUBSCRIBERS.

This number closes the volume for 1878, and all Subscribers in arrears who do not settle up before the 15th of December will have bills sent to them, and we confidently expect in response a prompt remittance, so that we may be able to sustain ourselves under the newly reduced price of the Journal, and be gratified in giving our old friends the benefit of this great reduction.

"THE FRUIT RECORDER" has sent us marked copies of their journal, with the article of our correspondent, R. H. Haines, in the MARYLAND FARMER for November, cut from a copy of our paper, thereby clearly indicating that they mean *us* when they say,—"It shows that an editor that will publish such STUFF is either ignorant or careless." We were not aware that the editors of the *Fruit Recorder* had been appointed or were *per se* censors of the American Press. For ourselves, we acknowledge no right on the part of even the most *distinguished* of the editorial fraternity to censure us as either "ignorant" or "careless." We stand on our rights and our own merits, and happily are so well able to take care of our own interests as to be "careless" of any impertinent dictation as to the course we are to pursue in the management of our popular and long established magazine.

The first weeping willow in England is said to have been planted by Alexander Pope. He received a present of figs from Turkey, and, observing a twig in the basket ready to bud, planted it. From this stock all the millions in England and America is believed to hove sprung.

The State Fair of Virginia.

This Fair was held in Richmond on the 29th of October and continued four days. We had the pleasure to be present, and must say, among the great many fairs all over the country we have attended during many years past, we never enjoyed one, in every way, more than we did this one held at the capital of old Virginia. We met a great many old friends, whom we had not seen for a long lapse of time—we formed new acquaintances and ripened formerly slight acquaintances into friendship in many cases—we were the recipient of favors and courtesies that seem natural to the sons of the old dominion. Among these we can not refrain from acknowledging the obligation we are under, to the genial kindness, at all times during our stay, of Dr. L. R. Dickinson, Editor and Proprietor of the ably conducted and popular "SOUTHERN PLANTER AND FARMER."

The preparations were very extensive, yet there seemed a lack of room for the great amount of choice stock, poultry and farm products of every character. The display of machinery was very large and represented many of the best and newest inventions of the day. The floral and domestic halls were of the most attractive character, reflecting high credit upon the florists and amateur horticulturists, and proved that the daughters of Virginia were not a whit behind their sisters in other states, in all the taste and skillful industry required in well managed households.

The crowds that were in daily attendance showed that the people of the South felt a deep interest in agriculture and its kindred pursuits. The receipts of the Association were large and very encouraging to the managers. The Society united all the solid features that characterized the palmy days of our earlier associations of like character, with the usual amusements, parades, shows and clap-traps that have particularly distinguished modern management of agricultural fairs.

The great characters of this Society, which caused us to remember vividly the scenes of years past, when the State Society of Maryland held evening meetings, was the large attendance at the rooms of the association, when spirited discussions took place upon the subjects connected with the interests of the Society and of agriculture; when pleasant reunions of farmers and free interchange of opinions took place. There was lively interest manifested in the work they felt to be closely bound up in their welfare. These evening meetings we enjoyed as we used to do in our old Maryland Society meetings. There was a "feast of reason," an intellectual banquet after the days review of

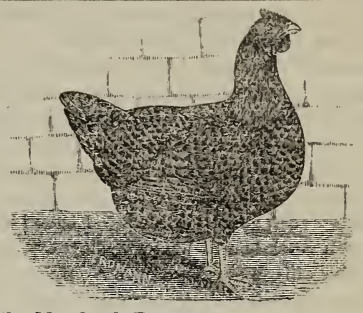
the objects on the grounds. Success must ever attend societies conducted like this Virginia and the Northern State Societies. We really felt chagrined when we remembered that for the last four or five years, not enough members of our State Society in Maryland could be gathered together in any one evening of its annual meeting, to constitute a quorum for election of officers. Here in Richmond, large numbers of the best and most intellectual land owners of the State, nightly assemble to confer together as to what was best to be done for the progress of agriculture, and what measures, social, political and practical, should be adopted to advance the interests of the farming community. We bid this noble association of Virginia farmers, God speed, and feel sure if they will harmoniously go on as they have begun, they accomplish immense good for the elevation of their occupation and the increase of the wealth and power of their State morally, physically and politically.

E. W.

LARGE MANGELS.—Mr. F. B. Steiner, formerly of Baltimore, who owns a well-managed farm on Rhode River, Anne Arundel Co., Md., left at our office a number of splendid specimens of his mangels grown this year They were from 2 to 2 feet 10 inches long, and one weighed 14 pounds. He raised 1,474 bushels on 1 and 1-3 acres of land. He states the cost of growing was a small fraction under 4 cents per bushel. Mr. Steiner says he believes if capitalists would start a beet-sugar establishment, that the farmers in his section would furnish all the beets required, as he is confident it would be the most paying crop that can be grown.

Mr. Steiner is a go-a-head farmer, and this year cut off 25 acres of corn with the corn mower, one man and two horses employed only two days. His corn is drilled 36 to 40 inches between the drills, and he has no trouble in cutting two rows at a time with the mower. He practises level cultivation, and sets the mower about 4 to 6 inches above the grouud. It cuts the green stalks with all the seeming ease that grass is cut. This process is a great saving of human labor, and much more rapid. Broadcast corn he mows in the same way, and finds it wilts faster cut with the Mower than when cut with the Reaper or by hand, as by either of the latter methods it is left in bunches whereas the Mower leaves it scattered like grass,

The Poultry House.



For the Maryland Farmer.

PLYMOUTH ROCKS.

Nothing could show more plainly that farmers are anxious to improve their poultry stock for market purposes, than the great demand for Plymouth Rocks. This demand is not *speculation* from *fanciers* at high prices, but is directly from fanciers at moderate prices, to be sure, but in such quantities that it pays the fancier to raise them. Only this day a farmer came in a store and bought three Plymouth Rock Cockerels, remarking that what he wanted was early hatched birds of good size, good form and low well set legs, of a bright yellow color. He told us that for several years he has been using only Plymouth Rock Roosters on common or cross bred hens, and that the first cross makes excellent early matured chicks, of large size, choice quality and fine appearance for market. He says he has a number of choice half-bred cockerels as large as the pure breeds, for which he finds ready sale to his neighbors at $1 each, but he would not use them for his own breeding, preferring each year to buy thorough-bred cocks of fresh blood. This man's "head is level," as the great value of thorough-bred males of fowls as well as of swine, is in the *first* cross in *common* or native stock. The expense in buying new males each year is very moderate compared with the advantages.

Plymouth Rocks seem to answer that often asked question, *which is the best breed of fowls?* They combine more good qualities than have yet been concentrated in any other one breed. They are not so large as the Brahmas and Cochins, but are much earlier matured, feather more quickly and will even out weigh them when young. Cocks weigh from 8½ to 9½ pounds, and hens from 6½ and 7½ pounds on an average, and are surely large enough for practical purposes. They have the great advantage over Asiatics of being clean legged and having greater perfection of form. They are not quite such extreme layers as the Leghorns,

Hamburgs or Polish, but then these varieties are non-sitters of very small size—two disadvantages to the average farmer.

We can safely say that the Plymouth Rocks lay more eggs in a year than any other beed that hatches and rears its own young—the games alone possibly excepted. They are good sitters, but easily broken up and after raising a brood of chicks they are remarkable for beginning to lay again earlier than any other fowls. I have known a Plymouth Rock hen to begin to lay when her chicks were only one week old, to continue to lay over sixty eggs before desiring to sit again. The above illustration was drawn from life of a young pullet raised by the writer the past season, and while it does not show the full development of an old hen yet. H Erdenmann, the well known artist, pronounced it the most perfect pullet he had ever drawn. It is to be hoped that the day is not far distant when the Plymouth Rocks will become the common fowl of our country—being bred on every farm, either pure or crossed for market, and at the same time being continually perfected or improved by *fanciers* to whom farmers must look for their fresh crosses. One lingering fault to be thoroughly exterminated is the tendency to black or colored scales on the front of the legs of pullets, which now only disappears with age.

Phila. Pa. W. ATLEE BURPEE.

For the Maryland Farmer.

MESSRS. EDITORS:

I beg to hand you a list of some poultry and pet stock shows soon to occur, which I take from the *Poultry World*, H. H. Stoddard, proprietor, Harford, Conn. I beg leave to call special attention to the card of the Virginia Poultry Association, and hope that the show may have a lively influence over the poultry interest of the Old Dominion; for no State has superior advantages to Virginia for poultry raising, with her mild winters, many streams of clear water in which the ducks and geese may float and the young green goose dive at the reflection of his lady-love, and, as many other geese of the present day, get their bills a little muddied by pressing too closely on a shadowed illusion. The old State also has its green hills and long ranges of fresh meadow, in which can be heard the sound of the wild turkey's voice and the drumming of the pheasant on many a fallen tree or dead limb, which sounds seem to be a voice from the wilderness crying "Prepare and make us comfortable houses, and not lousy sepulchres for our bones and we will come and dwell with you and make you happy with the beauty of our plumage and our happy ways. We will scratch up the old woman's flower garden, sometimes, and to keep peace in the family occasionally will take a turn around the old man's prize wheat and potato patches, and at Christmas and Thanksgiving Day—what then?—Over eighteen hundred years ago it was declared that no pleasnre was taken in the blood and flesh of bulls and goats, and the great American people in the advanced civilization of the nineteenth century can't give thanks to God without a poor old turkey or goose,—and, if not these, for the poor, an old duck, hen, or possibly a noble old rooster whose voice has hailed for many a day the coming of the morn. I do not mean to condemn the use of fowls for food, but I think if the President would issue a proclamatton that no fowls to be eaten on Thanksgiving Day, it would be more Christian-like. Is it giving thanks to God for a man to eat twice as much turkey as his stomach can digest? Is it giving thanks?—that pestilential stench of rotten poultry, which rises from the market houses the week following Thanksgiving Day, proving that too many innocent little lives had been destroyed, and that they had been killed only to prove a nuisance. Your cruelty to animals Association might well turn a little of their attention to cruelty to fowls, which exists in too many and horrible shapes to mention here.

In publishing the following notices of shows it may be well to advise exhibitors to ship fowls always in coops lined by tacking cotton cloth around the inside; this guards against having the plumage broken or ruffled by wooden slats; it also prevents the fowls from getting their heads, feet or long feathers through the slats, which invariably disfigures or injures them. Nail a deep water can to the side of the coop, as high as the fowl can reach to drink. Put clean, dry straw on the bottom of the coop, Feed with wheat or cracked corn, and never with meal or any soft food which can soil the plumage, In mating for the show pen, take the *Standard* and examine every point; and mate for the show pen and not for breeding — remembering that birds must correspond as nearly as possble to standard for the show pen, and must be mated as nearly as possible resembling each other in marking, whilst the opposite is often desirable in same breeds in mating for color in breeding pens.

The Virginia Poultry Association has been very fortunate in securing Mr. James M. Lambing, of Parker's Landing, Penn., as judge for their coming show, as he is a breeder of established reputation, and whose judgment on many varieties of fowls

is unquestioned. Mr. Lambing is noted as a breeder of Black, Silver Spangled and Golden Penciled Hamburgs, Light Brahmas, Partridge Cochins, Plymouth Rocks, White Leghorns, India Silkies, B. B. K. Game Bantams, Imperial Pekin and Rouen Ducks.

W. S. TEMPLE,
47 S. Howard Street.

Poultry Shows to Occur.

VIRGINIA POULTRY ASSOCIATION.

The second annual exhibition of the Virginia Poultry Association, will be held in the city of Richmond, Va., January 15, 16 and 17, 1878.

We have secured the services of Mr. James M. Lambing, of Parker's Landing. Penn., to act as Judge on that occasion. We cordially invite fanciers from all the States to come with or send their fowls to the exhibition.

Premium lists now ready.

A. M. BOWMAN, President.
H. THEODORE ELLISON, Secretary,

Western Reserve Poultry, Pigeon, and Pet Stock Ass'n, Mantua Station, O. Wm. Courtney, Sec'y. Dec. 10–12, 1878.

Southern Conn. Poultry Ass'n, New Haven. F. A. Chase, Sec'y. Dec. 10–13, 1878.

Oneida (Ill.) Poultry Ass'n, Oneida, Ill. L. T. Tate, Sec'y. Dec. 11–12, 1878.

R. I. Poultry and Columbarian Society, Providence. Jas. L. Bullock, Sec'y. Dec. 12–18, 1878.

Wabash Valley Poultry Asn'n, Lafayette, Ind. R. Twells, Sec'y, Dec. 16–20, 1878.

Chenango and Madison Union Poultry Association. Sherburne, N. Y. G. W. Little, Sec'y. Dec. 17–19, 1878

Vermont State Poultry Association, Montpelier. Fred. A. Field, Sec'y. Dec. 17–19, 1878.

Berkshire County Poultry Ass'n, Pittsfield, Mass. Wm. K. Rice, Sec'y. Dec. 17–20, 1878.

Parker City Poultry Ass'n, Parker's Landing, Penn. James M. Lambing, Sec'y. Dec. 20–25, 1878.

Germantown, Phila. (Penn.) Poultry and Pet Stock Ass'n. Jas. Lisk, Sec'y. Dec. 24–26, 1878.

La Grange Poultry Association, La Grange, Ind. F. D. Knick, Sec'y. Dec. 24–28, 1878.

Southern Mass, Poultry Association, New Bedford. Edmund Rodmau, See'y. Dec. 24–31, 1878.

Plymouth (Penn.) Poultry and Pet Stock Ass'n, Plymouth. J. W. Vandlenig, Sec'y. Dec. 25–27, 1878.

Easton Poultry Association, Easton, Penn. J. L. Otto, Sec'y. Dec. 31, '78—Jan. 3, '79.

Kane Co. (Ill.) Poultry Association, Aurora, Ill. R. W. Gates, Sec'y. Dec. 31, '78—Jan. 3, '79.

Connecticut State Poultry Association, Hartford. I. Altman, Sec'y. Dec. 31, 78, to Jan 7, '79.

THE APIARY.

BEES FOR FARMERS.

There is no good reason why every farmer should not make his land literally flow with milk and honey. From the cows that graze upon the hillsides comes a rich abundance of milk, and if only a few colonies of bees are cherished, there will also be an abundance of honey.

It is with bees as with many other directions of farm industry, a reading of the principles of bee culture as given in the books, as coming from professionals, are so elaborate as to deter the average farmer from entering upon this line of business. But this need not be so, for while extra care will produce correspondingly good results, even satisfactory results may be attained with comparatively no expenditure of labor.

At the start, all that is necessary is two or three good strong colonies of bees. These may even be housed or hived in a common square box, with a safe covering and a shelf at the bottom upon which the bees can alight for entering the hive.

Where box honey is desired, a hive similar to the above but with an upper apartment with two holes through the partition to allow the passage of the bees into small boxes having corresponding holes; the boxes have a glass in the front, that the filling of the boxes may be discovered by opening the door to the upper apartment. When the boxes are filled, they are removed by slipping a tin slide between the box and the hive, shutting up the passage between the two, and pulling the box or boxes out.

The hives may be set upon a wide board or set in a frame and supported by means of strips attached to opposite sides So long as the colonies are strong, for ordinary family use, three or four colonies are sufficient as a stock trade. If one is to set out in this branch of industry, they must be certain that there is sufficient bee pasturage, or else the effort will prove a failure, for bees will no more thrive and prove any wise remunerative, without feed, than will a field of corn or potatoes without fertilizers. Assuming that the pasturage is ample, that the farmer has a few colonies well established, and it remains to describe the after service required. Ordinarily bees will require no care in the winter, except if somewhat warm it is some times deemed advisable to remove them to a darkened and as cool a room as possible.

In the late spring or early summer they will usually swarm, and sometimes twice in a season, and will usually alight upon the twig of a tree

or a small branch and if provided with a hive, will generally accommodate themselves to it with no trouble.

To hive them have a table spread with a clean cloth under or near the place where the bees alight with two sticks for the hive to rest upon, and then cut off carefully the branch with the bees upon it, placing it upon the table with the hive turned over them. If one is at all afraid of bees they had better protect themselves with netting before undertaking to handle them, although when bees swarm they usually gorge themselves with honey from the parent hive, as a stock in trade to commence business with, and are less troublesome than at other times. We seldom protect ourselves in hiving bees and have sometimes dropped accidentally a swarm, being covered with bees and escaping without a sting.

Ordinarily a colony will fill the hive with comb and honey by the close of the season, and then the honey in the kind of hives described is only obtained by "taking up" the colony, that is, by destroying them. This is accomplished by digging a little hole in the ground about the size of the hive, heating a stone red hot and placing upon it a little quantity of powdered brimstone, placing the hive with the bottom removed over the same, closing up around it with the dirt removed from the hole; this smothers the bees and then the hon ey can be removed without danger.

If there is a desire to pursue a more approved course, some of the patent, non-swarming, movable comb frame hives must be used, but these involve much more attention.

Honey is one of the sweets that every family may be possessed of if they are willing to do just a little service in a rude way. The plan above requires only the expenditure of a few dollars for the original colonies, for the hives can be made of ordinary pine boards, planed smoothly and nailed together as every ordinary farmer ought to be able to do.

There is always a satisfaction in the knowledge that anything that comes in the line of luxury has has been produced by ones self and this is no less true in the case of honey; and yet it may be said that comparatively few farmers are in the full enjoyment of it as coming by their own industry, partly for the reason that they imagine that there is some "royal road" to its success.

It is hoped that what is above written will dispel any such thoughts and that many families now destitute of this desirable article will be made happy in its possession.

Columbia, Conn. WILLIAM H. YEOMANS.

CORN, CORN SUGAR, &c.

EDITORS MARYLAND FARMER:—Your inquiry for a solution of the mystery of having two-ears grow on a corn-stalk, with a different number of rows on each ear, reminds me of my experience with sugar cane being the same as that of the cultivator of the Compton corn. I account for it by the combination of the two sorts in the parent stalks of the preceding year; the one giving pollen may have been eight rowed, and the one receiving it twelve-rowed—the seed, retaining both characteristics, has reproduced them in given instances. We have analagous experiences in the animal kingdom.

CORN SUGAR.

I am glad to see that so much attention is being directed to the manufacture of sugar from corn-stalks. A very fine sample was shown in the exhibits at the Centennial Exposition, at Philadelphia. I have lately seen an item, in a Boston paper, saying that a Pennsylvanian has been able to make it for three cents a pound.

CORN VINEGAR.

For three years I have seen a sign, in large letters, on a house in Philadelphia—"Corn Vinegar." I suppose from its location and surroundings, the grain is the part of the corn here used. I now have a keg of juice of the stalks of sugar-corn, on which I am experimenting to make vinegar. It bids fair to be a success, by being carried through the same process as that which makes good cider vinegar.

CORN MOLASSES.

Shortly after I gathered my sugar-corn for canning, I cut off the top of the stalks and stripped the leaves from the butts. As the machinery of the sorghum mill was not available' I run them through an ordinary feed cutter, and then ground and pressed them like apples, and boiled down the juice as every housekeeper boils down cider. The yield of juice was at the rate of 14 gallons from 5 rows, each 7 rods long. I boiled it down 7 parts to 1, which made it thick, rich syrup. I exhibited a sample at our fair, which attracted much attention and was pronounced by a number of good judges to be superior to molasses from sorghum. One of my friends was so well pleased with it, he took a larger quantity than I had to the sorghum mill when it was in operation, and got from it a syrup superior to mine. He intends to raise more sugar-corn next year than this, and make a larger quantity of the molasses I raise the mammoth variety, and find it sweeter as well as larger. Many ears weigh over a pound after being husked, and many of the stalks from the ear down weighed over a pound each.

Yours truly, W. W. MEECH.

Vineland, N. J., Nov. 5th, 1878.

THE DAIRY.

Milk comes through Inheritance.

A cow eats food and milk is made, says Dr. Sturtevant, in quantities according as the ancestry of the cow have been good or poor milkers. The "natural'. or wild cow gives hardly enough milk for her calf, and not enough to satisfy a domestic calf. Feed the wild cow high and her milk yield is slight. Large quantity of milk comes largely through inheritance. It is the same with quality. The milk of different breeds has a different character. When a cow of any breed has enough food — considered in the elements of which the food is made up — if there is nothing lacking in the food that is needful to her growth and health, then I think it is agreed by the best authority that a mere increase of food will not change the quality of the milk, while it will increase the quantity.

The Cow for the Family.

Dairymen and farmers should be well informed as to the best kind of cow for their special use, yet what a variety of opinion exists in regard to which kind is the best? For family use, where one cow is kept to supply milk, cream, and butter, it is a great object to get an animal that is easily kept, that is gentle, a good milker, and yields much cream and butter. Of all the varieties of cows, the cross of the pure Ayrshire and the Jersey is the one to be desired for the use of the family or for the butter dairy! A cow that can be fed on the mowing of a half acre lawn, with a quart or two of meal daily,—that can be made a pet of, and that will give a pound of golden butter every twenty-four hours, with cream for the table, and milk for all purposes and to spare,—is, without doubt, the best possible and the cheapest cow for a family, and for the butter dairy as well.—*Country Gentleman.*

Cutting Straw.

Straw contains the phosphates in large proportion, and animals need phosphates to provide materials for the formation of bones. But milch cows, particularly, need phosphates, as these are always present in milk ; every ten gallons of milk containing half a pound of phosphates or bone-earth. Thus, a cow giving twenty quarts of milk a day needs to draw from its food two pounds of bone earth every week. Straw also serves the useful purpose of distending the stomach, and thus promotes its healthy action. There is great saving in the cutting of straw. The animals do not waste it by dragging it out of their manger and trampling it under their feet. Time and labor are also saved the animal in masticating its food. The cow obtains her supply of food readily, and then lies down to chew her cud and digest the food.—*Ciucinnati Weekly Enquirer.*

The farmers in this section are realizing the importance of dairying. The first year we could only get 120 cows ; the second, 190 ; the third, 175 ; and this year we have 600, with a fair prospect of increasing to 1,000 next season.—*Western Farm and Live Stock Journal.*

The Jersey and the Common Cow.

Much has been said in regard to the Jersey cow, as being too small for beef after becoming too old for milk. Now let us look at the figures in that matter and see what the real facts are in this case. The majority of farmers, in looking at a Jersey cow, will say—too small for all purposes for us farmers ; we want something that will make oxen, and beef, and when a cow is too old to milk we want something that will make good beef, and a lot of it ; we want none of your "deer" meat. I think this is a mistaken idea that farmers have fallen into without looking into the question at all Now for the figures. An average Je rsey cow will in one year, make 250 pounds of nice yellow butter, worth now in the market twenty-five cents a pound, amounting in one year to $62.50, and raise a calf on the skim milk, worth, with us, $14, making the sum of 77.50, without making any charge for the skim milk, after the calf is weaned. Now let us take the average native or common cow and see what she will do. From the best authority I can find, together with my own experience, she will in one year make 150 pounds of butter, worth now in our markets twenty-two cents a pound, amounting to the sum of $33, and a calf fed on skim milk, worth $5, making in all $38. Now, take $38 from 77.50, the amount of the product of the Jersey, and you have $44.50 in favor of the little Jersey cow. Now multiply $44.50 by 10, the number of years we usually milk a cow before turning her into beef, and you have the nice little sum of $445 in favor of the latter, when you get ready to make beefout of her. Now it does not make much difference about the price of beef in so small amount as there would be between the large cow and the small one compared with the large difference in the amount of butter, and, in addition to the above,

some credit must be given to the Jersey for a less amount of food consumed, which is about 2½ per cent of the live weight on the difference of the of the two cows.

In looking the matter over, I cannot but come to the conclusion that, for dairying purposes, the Jersey cow is the cow for the farmers. There is a great amount of labor in the manufacturing of butter, both in-doors and out, and a cow that will make only 150 pounds of butter a year is not worth keeping for butter at twenty-five cents a pound, and hay at twelve dollars a ton will not more than pay her keeping, so that there is a total loss of the labor employed; whereas a cow that will make 250 pounds a year will afford a good profit over the keep of the cow.—*H. E. Abbott, in N. E. Farmer.*

BLOODY MILK,—I would advise your correspondent having a cow giving bloody milk to give her a half pint of *wood* ashes, at night, in oats or bran. I think three or four doses will cure her, if the case is not of too long standing. I have never known the ashes to do any harm.

Smyrna, Me., Oct. 25, 1878. R. E. T.

TESTING MILK.—It is stated, in a German paper, that the purity of milk may be tested by the following very simple method: A well-polished knitting needle is dipped into a deep vessel of milk, and immediately withdrawn in an upright position; when, if the sample be pure, some of the fluid will be found to adhere to it, while such is not the case if water has been added to the milk, even in the smallest proportions.

THE PORK TRADE.

The immense number of hogs raised this year will have the effect of reducing very much the price of pork and bacon. The pork packers of Cincinnati and Chicago admit that the ruling prices will be very low for the coming year, unless some extraordinary demaud in Europe is caused by political complications that lead to war, but which is unlikely. Summer packing is on the increase and this is one cause why pork will lower in price, as more young hogs of smaller weights are being slaughtered and can be put on the market at less cost to the breeders of these animals. The summer packing, which is becoming very popular, is upsetting the winter pork trade. Two million of hogs were packed in Chicago during the past "summer season," from March to November, instead of *none* a few years ago. Mr. Rawson an extensive pork packer of Cincinnati says, "there probably will be a great deal of summer packing next year in Cincinnati."

No matter what may be the foreign demand, pork must fall in price, and to that extent the mass of consumers will be benefited, while it should stimulate our farmers to raise their own pork and some for sale, as it shows conclusively with improved breeds and high feeding pork can be raised profitably at much lower rates than have prevailed for years past. When a nation has a plenty of meat and bread, it must be prosperous—these two essentials of life-support being high and scarce must bring distress upon the people. No man can afford to labor for low wages when his meat and bread is at extravagant rates. Pork at $3 per 100 pounds, corn at 50 cents per bushel and wheat at $1, men can afford to work well at $1 per day. It was thus in the palmy days of the Republic, but when wages were $3 per day and flour at $10 per barrel with pork at 12 cents and beef 25 cents per pound, then came on us the dismal days of no employment for labor, general mistrust, discontent and the plea for modern communism.

SPECIAL PREMIUM!

Messrs. W. ATLEE BURPEE & Co., of Philadelphia, have generously donated for premium to getters up of club subscriptions to MARYLAND FARMER for 1879, *one choice Boar Pig*, three months old, of their best bred families of that breed of hogs. We offer this splendid pig to the party who before the 10th of January, 1879, will send us the largest number, over 15, of subscribers, with *one dollar* cash for each name. It will be boxed, with feed and delivered on board boat or rail road, free, directed to the fortunate winner of the prize.

We refer our readers to the advertisement of Mr. A. E. Warner, 135 W. Baltimore Street, Baltimore. For over half a century this excellent silver and jewelry establishment has maintained the highest character for excellence and taste in workmanship and fidelity in its general dealings. It is no disparagement to others in like business to say this is one of, if not the oldest and largest Houses engaged in their line, in the city of Baltimore. This house is remarkable for its skill in getting up holiday, marriage and complimentary presentations.

JOURNALISTIC.

THE SUNDAY AFTERNOON, one of our best magazines, published monthly at Springfield, Mass., makes a special offer, to send the magazine to each one who subscribes before January 1st 1879 at $2.10, postage paid; the regular price being $3 a year.

SAVANNAH WEEKLY NEWS.—In that popular paper of November 23d, will be commenced a new serial story of absorbing interest, entitled "Afterward," from the gifted pen of Mrs. Ophelia Nisbet Reid, whose charming stories "My Mother's Daughter" and "Mrs. Dare," have added such literary interest to this deservedly popular journal.

The NEWS also commences the publication of a series of articles on "Orange Culture," written expressly for its pages by Mr. C. Codrington, of Florida. These articles, which have been prepared after much practical experience and careful consultation of the best authorities, will be of special interest to those engaged in the culture of the orange.

Its charming stories by Southern authors, the able contributions of its numerous correspondents, together with its agricultural department, its careful compilation of the news of the day, foreign and domestic, its reliable market reports, editorial comments, and choice miscellaneous readings, makes the WEEKLY NEWS one of the most instructive, entertaining and valuable newspapers in the South.

INTERNATIONAL REVIEW for November-December, has besides the grave, elaborate articles of a Review an admirable story of Wilkie Collins, entitled "The shocking Story," and in order to include it, the publishers have enlarged the number by adding 48 extra pages. Price $6.50 per annum for this monthly volume.

DOMESTIC RECIPES.

In making pickle for beef and pork, or other meats, it is far better to use less saltpetre than is usually done. Saltpetre is a strong poison, though in small doses is cooling to the system overheated by strong drinks. Sulphate of potash should be substituted in a large degree. To every gallon of water 1 ounce of sulphate of potash and ½ ounce saltpetre is recommended by some. In its place, we use 1 pint of weak lye, made by boiling wood ashes, to each gallon of water, ½ lb. of sugar, ½ oz. of saltpetre, 1 lb. of salt; boil well, skim, and when cold strain and pour over the meat close-packed in the barrel.

POTATO SOUP.—Take six large, mealy potatoes, sliced and soaked an hour. Add one onion sliced and tie in a rag, a quart of milk, and a quarter of a pound of salt pork cut in slices. Boil them three-quarters of an hour and then add a table spoonful of melted butter and a well-beaten egg; mix in a cup of milk. The pork can be omitted, and use salt and pepper to flavor.

RICE PUDDING.—Take one quart milk, half cup rice (boiled), four table-spoonfuls sugar, four eggs; flavor. Put milk and sugar in saucepan and let it come to a boil; then stir in the rice which has been mixed with the beaten yolks; let this boil two or three minutes; beat the whites to a froth; mix with them two table-spoonfuls sugar; place on top the rice and place in the oven to brown.

FRENCH TOAST,—This is a very nice breakfast dish. Take a couple of eggs, beat them, and pour with them a little milk, season with pepper and salt. Cut your bread as if for toast, pour the egg over it, and put it in a pan of hot butter and fry brown.

CHEAP SALAD DRESSING for lettuce or cabbage. One egg well stirred with one teaspoonful of mixed mustard, and one of salt, two-thirds of a cup of vinegar, one cup of fresh cream, one tablespoonful of butter. Heat slowly, stirring constantly, till it comes to a boil. Make it in the morning, that it may become perfectly cold when put on the lettuce.

HAM TOAST.—Scrape or pound cold ham, mix it with beaten egg, season with pepper, lay on buttered toast, and place in a hot oven three or four minutes. Dried salmon, smoked tongue, potted meats, or any nice relish, are also good on toast, prepared like the ham.

LADIES DEPARTMENT.

Chats with the Ladies for December.

BY PATUXENT PLANTER.

"Aquarius rules the frozen skies,
Deep-frowning clouds on clouds arise,
Fraught with the thunder's roar;
With fury heaves the raging main,
When foaming billows lash in vain
The hoarse-resonnding shore."

When the Romans divided the year into ten months, this was called Decem-ber, or 10th month. The ancient Saxons called it Winter month, and after their conversion to Christianity they termed it Holy month, from the anniversary of the birth of Christ which occurs in it.

During my stay at the North, last summer, I was kindly taken by that warm-hearted entertainer of Southern people, Mr. Baker,—of whom and whose wonderful place I shall give an account hereafter,—to the splendid country seat of Mr. Hunnewell, near Wellesley Station, some 18 miles from Boston. This is a fine estate, of large size,—dairying the chief business, Nearly all the articles used for milk and butter are of heavy, clear glass. and the proprietor considers it as about as cheap as tin or crockery ware. Being glass, it is handled with more care and the cost in breakage is really less than when lower priced and harder to clean utensils are used, besides the proportion of cream to milk is more readily observed, as also any impurities in the milk. An excellent idea, in my opinion. About fifty acres around the handsome residence is devoted to the ornamental grounds, bordering on a beautiful lake or extensive pond for sailing and piscatory amusements. To these fifty acres is given the most elaborate finish. In a bend dropping from high-ground to the lake is an Italian garden, kept in perfect order, forming an amphitheatre with the bright waters of the lake for the proscenium, with terraces and broad marble steps at proper intervals ascending from the water to the plateau of high grouud. In this garden of "terraces on terraces upthrown," are winding gravel walks, marble statues, flower beds, unique hedges, evergreens trimmed in every form, of birds and beast, utensils, such as spoons, forks and couches, &c., all in the most perfect order conceivable; hardly one spear of grass, in the dense turf, higher than the other. On reaching the level ground, we behold a scene of wondrous beauty; no straight lines, but curved lines of walks and often abrupt turns that startle one by the sudden burst of beauty unfolded. At one moment you are in an entangled forest as if in its primeval state; then a wilderness of acacias, laurel, rhododendrons and other superb shrubbery; anon in the midst of a bewildering scene of rare, hardy and conservatory flowers. It is a scene of enchantment, and one realizes what he dreams of occasionally as Arcadia. We left this lovely spot with regret, and revert to it often in memory with pleasure.

Mr. H. deserves great credit for expending his vast income in this way, instead of placing the whole amount in a huge pile of stone brick and mortar, that once erected no longer gives employment to honest industry, but remains a lasting monument of the folly of man's contemptible pride, which some day in a country like ours will make an heir of a great castle poorer than the scullion in his kitchen He has an elegant, commodious dwelling, and grounds about it like a Garden of Eden, giving support to hundreds who otherwise might be in want. A cotemporary writer speaks of these grounds, and makes a proper distinction between palaces and ornamental grounds, as to their respective values to the suffering, intelligent laborers of the country. Mr. Hunnewell employs fifty laborers to keep in order the fifty acres of his place devoted exclusively to elaborate ornamentation.

The writer alluded to says.—"Although this expenditure of Mr. Hunnewell may seem large in this country, yet it has doubtless accomplished a vast amount of benefit to the community, by furnishing an example of beautiful landscape gardening, that not only stimulates others in planting on a smaller scale. but shows them how it should be done to produce the most pleasing effect. A hundred thousand dollars laid out in building a house is not an unknown expenditure in this country, but half that sum well devoted to landscape gardening would do incomparably more good."

It is to be hoped that other men of wealth in our country will follow the example of Mr. H., and make our country blossom as a rose-garden, giving employment to thousands and daily being the source of blessings on the heads of such patriots and men of intellectual taste, instead of building great castles which will not benefit but do a wrong to their descendants and be no advantage to their fellow-beings, while a lasting proof of the vanity of a narrow mind.

GOOD FAMILY APPLE SAUCE.—Two quarts of water, a pint of molasses, a root of ginger, and boil all together twenty minutes; put in while boiling a peck of pared, cored and quartered apples. Stew till tender.

We are happy to welcome, as a new contributor to our Ladies Department, "A," who is an accomplished lady of Baltimore and a frequent contributor to some of the popular weeklies of our city:

AUTUM'N.

Who can but love the Autumn?
With all its brilliant gems,
Crowning each noble forest tree
With noble diadems.

To me the Spring is lovely,
With every bursting bud,
And artless bird-voice minstrelsy,
And fragrant waving wood.

The Summer is a youthful queen,
Decked with a golden crown;—
Her seat a throne of emerald green,
Casting sweet blessings 'round.

The Winter, with his hoary head,
Looks like an aged sage,
Bearing upon his lofty brow
The marks of honest age.

Each season does its own
Peculiar good dispense,
But Autumn e'er appeals
To immaterial sense.

When called upon to yield
His last expiring breath,
He wraps him in his brightest robes,
To meet the conqueror — Death.

He bids us read his lore:
And moral comprehend,
To deck us with our choicest store,
To meet our coming end.

Take of affection's flowers,
Aud weave a chaplet fair
All interspersed with richest gems
Composed of virtues rare.

Go with a cheerful heart,
And bind it on thy brow,
To meet the form of Age, which comes
To sojourn with thee now.

This is the useful tale
Bright Autumn tells in love;
May we its language understand.
And it a blessing prove.

A PLEASANT LETTER.

BY R. D. O. SMITH, ESQ.—(CONCLUDED.)

Fredrickton is the capital of this province. It possesses about 7,000 inhabitants, and has a considerable trade in lumber and supplies for the lumber trade. Its principle street extends for a mile and a half, I should judge, along the bank of the river. Near one end are the government buildings —a most antiquated and quaint string of stone structures, hardly high enough for a grenadier to stand upright in. About midway is the court-house, which is a good brick structure, and the custom-house, which is of the antiquated style. At the far end, to the north, is the governor's residence —a large, roomy, stone-house, with a fine conservatory and good grounds. The city occupies a flat, extending half a mile, or more, back from the river, and its streets are laid off generally straight and at right angles to each other. I noticed a number of handsome churches,and presume the people behave themselves as well as can be expected.

If you will permit me, I will here introduce the Queen Hotel. It is said to be the best in Fredrickton, and I can testify that it is *very* good; more than all that, it is kept by a born Yankee, named Burnham, who turns out to be an old friend and school-mate of my wife, which adds quite a tinge of romance to my short visit at his place. Another thing I can promise you: if you go there and want to take a ride, he will send you out behind a horse which I don't believe you can equal in Baltimore county.

At eight o'clock on Thursday morning, I re-embarked for St. John. Before taking leave of this noble river, I must notice a practice here which I have not seen elsewhere, in making boat landings. My boat only touched the dock twice or three times on her course, yet she took and delivered passengers and freight a dozen or more times. When approaching a landing, a pretty vigorous use of the whiste would bring out a boat from the shore. The engine is stopped, and side-steps let down as the boat comes alongside. A man with a boat hook catches her prow, and in a few seconds passengers and baggage are transferred, the boat released, and we go on. If considerable freigh. is to be transferred, a scow is employed. On this trip down, in that way, we have taken on board and delivered dozens of passengers, and in one instance thirty bbls. of potatoes and a number of baskets full of other produce, to say nothing of several babies—an article which seems to abound here as elsewhere.

I am informed that the crops consist of hay, oats, rye, wheat and potatoes; corn does not find enough summer heat. The corn on the table is of a deep yellow color, but very fair in quality. I noticed excellent tomatoes and beets, turnips, cabbages, carrots, cucumbers and squashes, which can not be surpassed. The butter is not as good as that made in New England. Apples, for some reason, have not flourished until recently, but now do well—I saw them of good size and excellent appearance.

The rise of the tide at St. John is 22 feet or thereabout. At low water, the harbor bottom is exposed in many places, and it seems strange to one accustomed only to the comparatively tideless harbor further South, to see great ships left entirely out of water at the recession of the tide. In going up the St. John, I wondered at the absence of tide marks on the shore, and on my return I searched for the cause, and discovered it in a remarkable reef across the river, near its mouth. This reef is a dam for the river water; as the tide falls there is a cataract there, and for a mile below it formidable rapids, like a miniature Niagara. At high tide this cataract is covered and the rapids obliterated, so that boats can pass in safety; so that here we have phenomenon, perhaps, unmatched in the world, of a water fall, which, for a portion of each day *runs up hill.*

A fine suspension bridge spans the river just below the falls. In the primeval times, the river was shut in behind a ridge, which cuts transversely across the course of the river, joining the heights upon which the city stands with the heights back of Carlton. At that time the St. John river was a great lake with its level many feet higher than its present level, and probably having a cataract outlet at the point of its present outlet; gradually this outlet has been lower and lower, until at present there only remains a reef, over which the tide contends with the river current.

I walked through the St. John market twice. As I have remarked before, the vegetables displayed are unsurpassed in size and fine appearance, by any that I have seen elsewhere. I have very rarely seen them equalled by the selected lots displayed at our agricultural fairs. In view of the primitive and shiftless modes of agriculture, the quality of the vegetables displayed shows the capabilities of the soil under an enterprising government; and a little more of Yankee thrift among the people, I think the Valley of St. John would become a very garden.

Meats are from choice stock of good size and condition; but of fish I saw but a meager display. Time did not serve me for any examination of the mechanical industries; but a cursory examination failed to show evidence of important manufactures, except in the line of ship building. American goods and tools are everywhere displayed, and English goods appear to be correspondingly scarce. Those articles of Canadian make which I saw were very generally inferior imitations of American wares, and quite often as before imitated, made by using the parts of a Yankee machine for patterns from which to cast.

Fine ships are built at St. John, and I saw three new ones taking on board lumber, and being rigged at the same time. These ships presented good models and good taste in finish.

On the morning of September 7th, I bid adieu to this picturesque city, and turned my face westward. The road to Bangor passes through a country, rocky and desolate in appearance. Here and there we find a station in the woods, with, perhaps two or three small houses in the vicinity, and but little cultivated land, or any evidence of improvement. The original growth of timber has been all cut off, and along the line the succeeding growth has been pretty rigidly thinned. I notice the white birch is a prevalent growth. It makes most excellent fire wood, free from snapping sparks, which with other woods render open fires dangerous without wire fenders.

At Watt Junction we crossed the road leading from the lower St. Croix, Calais and St. Andrews to Houlton in our Arroostic country and to Woodstock, St. John River Valley, and on to the St. Lawrence—a field which *we* should have occupied.

At Vancevorough we cross the frontier, and once more find ourselves in the region of baked beans, and in the clutches of our treasury officials. They are courteous, however, in the discharge of a duty somewhat unpleasant, and the ordeal did not take away my appetite for the pretty fair dinner for which the train waited. As the general appearance of a crowd indicates the sort of people from which it is drawn and their character, so does the general appearance of an agricultural country index the character of the people and their institutions.

Let any one who cavils at our government and institutions, and pines for a strong and stable government instead, cross the border into Canada anywhere, and mark the change. You could hardly slice from the atlas patches anywhere, which, if placed side by side, would show a cleaner line of demarkation than is evident to the eye in crossing our frontier into Canada. On the other side, buildings inferior and ill kept; but little evidence of enterprise or thrift. On our side just the reverse.

In the waters of the St. Croix I will wash my pen and close my book.

With good wishes for your future success in voyaging, and that your bark may always sail over seas as pleasant as those we sailed together, and that your captain may always be as successful as Captain Kent in "keeping her aizy."

I am, truly yours,

R. D. O. SMITH.

Washington, 8th Oct., 1878.

PUBLICATIONS RECEIVED.

From the Smithsonian Institution, Annual Report of the Institution for the year 1877. We have glanced over it only and it appears to be a volume of much value and interest.

ON THE VALUATION OF COMMERCIAL FERTILIZERS.—An abridgment of a learned and very useful paper read before the State Agricultural Society of Georgia, at Athens, on 14th of August last, by Pendleton, the well known author of Pendleton's Scientific Agriculture.

AMATEURS' HAND BOOK OF PRACTICAL INFORMATION FOR THE WORKSHOP AND THE LABORATORY, price 10 cents, New York Industrial Publication Co. This cheap little book is worth to any body more than its cost, and to every one engaged in the business it relates to, it is worth a hundred times its cost. It is reliable in its recipes about bronzing, silvering, staining wood, soldering, preparing skins, &c.

ANATOMY, PROPAGATION AND CULTIVATION OF THE OYSTER.—An interesting little pamphlet by Dr. King of Baltimore. We shall make extracts from it soon.

THE HONEY BEE.—A good concise treatise on Bee Culture, by Thos. G. Newman, Editor of American Bee Journal, price 40 cents.

THE ADDRESS of William Parry, of Cinnaminson, N. J., delivered before the Saulsbury Farmers' Club of Buck's county Pa. It is a plain, useful practical paper which we shall extract from as soon as we can find room in our columns.

THE AMERICAN BEE JOURNAL, published by T. G. Newman & Son, Chicago, monthly, at $2 per year. This journal ought to be taken by all bee-keepers; it is neatly printed and replete in useful information about bees, bee-keeping and honey. It is full of information as to the habits of those busy extractors of sweets from flowers and herbs, whose products, with the yield from our cows, makes our land literally flow with "milk and honey."

History of the Maryland Agricultural and Mechanical Association.

CHAPTER VI.

At the October meeting fo 1850, Dr. Wharton of Washington county, offered the following resolutions accompanied with forcible and eloquent remarks. They were adopted:

Resolved, That the Maryland State Agricultural Society, whilst it regards its past progress with an honest pride, and looks forward hopefully to a complete realization of its most ambitious wishes, is compelled to acknowledge that the condition of its finances is such as to cripple its efforts towards extensive usefulness, and materially to retard its progress;

Resolved, That the advantages accruing to the city of Baltimore from the selection of the present site of our agricultural Fairs, are such as fully to justify the hopes we have hitherto entertained of receiving at her hands liberal and efficient aid—and that it is expedient and proper to make a last and earnest appeal to her citizens for such assistance as will enable us to make the present location permanent.

Resolved, That for the purpose of making this appeal properly and efficiently, a committee of be appointed, who shall in such manner and form as to them may seem most to command success, confer with the citizens of Baltimore, in each ward of the City, and make known to them in the fullest manner, our designs, our means, and condition, our reasonable expectations, and the ground upon which they are based.

Resolved, That the foregoing Preamble and Resolutions be published in the daily papers of the City of Baltimore.

This movement was followed by the strong appeal of President Calvert which was given in the last chapter. The President, in pursuance of authority vested in him, appointed thirty distinguished gentlemen a committee to carry into effect the above resolutions. The committee assembled at the Society rooms, on the 10th of December, 1850, and organized by calling Alexander Murdoch, Esq., to the chair and appointing James H. Luckett secretary. After interchange of views, Geo. W. Dobbin, Esq., submitted a preamble and resolutions, "proposing to raise the sum of 10,000 dollars, for the purchase of a lot of ground, and the and the erection of the necessary enclosures and building thereon, suitable for the purposes of the Society at its annual exhibitions — which were unanimously adopted."

"The chairman was authorized to appoint such committees in the several wards as might be deemed necessary to effectuate the object in view, and to call an adjourned meeting of the committee on the third Wednesday of January, and at the same time, to invite the attendance of the ward committees he may appoint."

The chair appointed sub-committees, one for each ward in the city, and soon more than the sum

named in the resolution of Mr. Dobbin was subscribed. The Committee appointed to purchase a place for holding the cattle-shows secured, in August, a well-located lot of 19 3-8 acres, at the head of North Charles Street, in a direct line from Washington Monument.

The officers went to work with a will, and had the grounds prepared for the Exhibition which took place on their new grounds, beginning on the 21st Oct. 1851 and continued to the 24th, inclusive. This was one of the most interesting exhibitions the Society ever held. The great statesman, Daniel Webster, was the appointed orator, but at the last moment he failed to appear for good reasons assigned. The able Senator of Illinois, the Hon. S. A. Douglass, happened to be in Baltimore, and consented at a moments notice to supply the place of Mr. Webster. It is useless to add that his impromptu address was received with the highest admiration by the large and intelligent crowd which thronged about the stand.

At this meeting, the exhibition of stock of all kinds,—horses particularly—was large and choice; there was a great display of machinery, and indeed all the departments were full, which, altogether made up a grand show that attracted throngs of people to the exhibition.

Messrs. C. B. Calvert, Clement Hill, John Glenn, Col. Carroll, J. J. Hewlett, A. Clement, S. T. Earle and Jas. N. Goldsborough took premiums for *Short Horns*, in the different classes.

For *Devons* the recipients of premiums were Messrs. Oden Bowie, Holcomb of Delaware, A. B. Davis, S. T. C. Brown, Lewis. Prof. Baer, H. Crowl, L. Bailey and H. G. S. Key.

Holsteins, Messrs. W. B. Dobbin, Zenos Barnum, G. Y. Worthington, G. V. Lurman, C. C. Brown, C. B. Calvert and C. J. B. Mitchell received premiums. Mr. George Patterson exhibited a splendid herd of Devons, but not for competition for premiums.

For Blooded Horses.—Messrs. Dodge, Boulware, O. Bowie, Dimmit, Ridgely, Brown and Col. Ware received the premiums award d in that class.

Sheep.—As usual there was a fine display of sheep and a close contest between those eminent sheep breeders, Col. Ware of Va., Reybold of Del. A. Clement of Pa., and Messrs. H. Carroll, W' Jessup, T. Goldsborough, M. T. Goldsborough, J. Merryman and Col. C. Carroll, each one of whom received one or more premiums. The Committee on Sheep in their report thus speaks of some fine wool, for which no premium had been offered by the Society:

"Mr. A. L. Bingham, of West Cornwall, Vermont, by his agent, Jno. Johnson, has exhibited three specimens of the French Merino, most curious and wonderful; and though the committee have not the same familiarity with this species of sheep, to speak with absolute certainty of their aptness to our soil and climate, they, as all others, could not fail to admire the size and form of their bodies, and the exquisite texture of their luxuriant fleeces. There are three bucks of these Sheep, two imported and one Lamb of 7 months, reared by the exhibitor. They are represented as reaching as high as 300 lbs. live weight of carcass, and from 15 to 35 lbs. weight of fleece in the dirt. The committee cannot but believe that their introduction, either in their purity or by a cross on some of our own flocks, would conduce to the productiveness and improvement of sheep husbandry of the Middle and Southern States. They recommend to the Society a special premium for these animals of $20."

The show of Swine was excellent, and is worthy of note, that at this show, no other breeds were exhibited but Chester, China, and Russian crossed with the Chester.

The display of vegetables was the finest ever made at any exhibition of the Society. Col. Oden Bowie carried off the premium for the choicest and largest assortment.

The writer heard General Scott, who was present on the occasion, that he had never seen celery as large and deliciously crisp and tender as that which he saw and tested in this collection.

The Floral Hall and Household department was very fine and reflected the highest honor on the ladies of the State, whose interest in the Society seemed to have increased even since the beautiful exhibition of their skill and industry made at the previous fairs.

The display of Fruits was very gratifying and showed how much horticulture had advanced in Maryland since the Society was first established.

[TO BE CONTINUED.]

THE AMERICAN ANTIQUARIAN, quarterly, Rev. S. D. Peet, Editor, Unionville, Ohio. A very readable journal, especially to all who love to explore regions of the past and find interest in the lore of defunct times, as recorded by objects that are discovered by explorations.

CALIFORNIA WHEAT TAKES THE PALM.—For the best wheat at the Paris Exposition, a gold medal was accorded Hon. John Bidwell, of Chico, Cal.; that sent by him exhibiting the remarkable weight of sixty eight pounds per bushel.